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MONTHLY BULLETIN
HEALTH DEPARTMENT

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CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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MORBIDITY AND MORTALITY STATISTICS FOR 1926.

News stories in the public press— early in January, 1927— state that statistics for the year 1926 will show a great increase in the number of deaths over the previous year. As will be seen by the figures here quoted, Boston's increase will be comparatively slight,— eighty-seven more deaths,— which raises the death rate to the extent of only .04 per cent, the rate for 1925 being 14.77 and for 1926 14.81 per 1,000 population.

The number of births for the year is greater than last year to the number of 304. The birth rate is accordingly increased, and this increase is reflected in a lower infant mortality rate of children under one year of age. The actual number of such deaths will be lower this year, so that for 1926 the infant mortality rate will be 82.96 per 1,000 births as against 85.07 for 1925.

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BOSTON HEALTH DEPARTMENT.—ESTIMATES OF DEATHS IN BOSTON FOR CALENDAR YEAR 1926, WITH COMPARISONS FOR PREVIOUS THREE YEARS.

(These figures include residents and nonresidents.)

	1926.	Total 1925.	Total, 1924.	Total, 1923.
Total deaths	11,658	11,571	10,933	11,503
Death rate per 1,000 population	(14.81)	(14.77)	(14.07)	(14.93)
Total live births	18,750	18,596	19,776	19,020
Birth rate per 1,000 population	(23.82)	(23.74)	(25.46)	(24.69)
Total infant deaths	1,568	1,582	1,472	1,569
Infant mortality rate per 1,000 live births	(83.63)	(85.2)	(74.4)	(82.5)
Total deaths over sixty years	4,495	4,360	4,000	4,265
Deaths of mothers from pregnancy	139	125	150	137
Maternal mortality rate per 1,000 live births and stillbirths	(7.2)	(6.5)	(7.3)	(7.0)

(These figures include residents and nonresidents.)

	Estimated 1926.	Total, 1925.	Total, 1924.	Total, 1923.
TOTAL DEATHS FROM:				
Anterior poliomyelitis	7	9	6	10
Cerebro spinal meningitis	27	24	19	22
Diphtheria	55	99	168	173
Influenza	77	81	30	97
Measles	61	113	44	57
Pneumonia (broncho)	685	624	542	678
Pneumonia (lobar)	609	557	482	635
Scarlet fever	40	47	51	58
Tuberculosis (pulmonary)	685	670	670	677
Tuberculosis (other forms)	116	117	114	114
Typhoid fever	14	27	15	10
Whooping cough	109	69	21	109

	Estimated 1926.	Total, 1925.	Total, 1924.	Total, 1923.
TOTAL DEATHS FROM:				
Heart disease	2,269	2,008	1,742	1,880
Nephritis (chronic)	621	591	577	649
Cerebral hemorrhage	625	689	749	705
Arteriosclerosis	328	396	392	404
Totals	3,843	2,684	3,460	3,638

	Estimated 1926.	Total, 1925.	Total, 1924.	Total, 1923.
TOTAL DEATHS FROM:				
Cancer	1,173	1,159	1,189	1,142
Diarrhea and enteritis (under two years)	235	157	162	148
Accidents	585	660	608	636
Suicides	105	111	109	123
Homicides	25	27	40	37
Diabetes mellitus	203	166	184	187
Alcoholism	147	197	210	170

CASES AND DEATHS OF COMMUNICABLE DISEASES REPORTED 1926,* 1925, 1924 AND 1923.

	1926. Cases.	1926. Deaths.	1925. Cases.	1925. Deaths.	1924. Cases.	1924. Deaths.	1923. Cases.	1923. Deaths.
Actinomycosis	1	1	1	1	3	2	5	3
Anterior poliomyelitis	29	7	46	9	76	6	48	10
Anthrax	—	—	—	—	2	—	2	—
Cerebro-spinal meningitis	41	26	42	24	35	19	35	22
Chicken pox	2,117	4	1,516	2	1,886	3	2,017	3
Diphtheria	982	54	1,256	99	2,521	168	3,257	173
Dog bite (requiring anti-rabic treatment)	36	—	21	—	67	—	46	—
Cat bite	1	—	1	—	1	—	—	—
Dysentery:								
Amebic	1	—	5	1	3	3	—	—
Bacillary	5	2	20	3	8	1	—	—
Flexner	—	—	—	—	1	—	—	—
Shiga	—	—	—	—	2	—	—	—
Not specified	5	5	2	2	9	—	2	2
Encephalitis lethargica	30	18	59	32	42	16	58	24
German measles	2,062	2	586	—	191	1	56	—
Hookworm	8	—	20	—	16	—	10	—
Influenza	411	76	357	83	127	30	372	97
Malaria	8	—	3	1	11	—	11	—
Measles	4,331	60	6,683	114	4,758	44	5,023	57
Mumps	1,577	—	283	—	719	—	1,624	—
Pellagra	6	2	10	3	17	7	8	6
Pneumonia (lobar)	1,603	607	1,807	560	1,565	482	1,311	635
Rabies	—	—	—	—	—	—	1	1
Scarlet fever	3,064	38	2,873	48	3,844	51	3,211	58
Septic sore throat	67	11	68	15	79	11	42	11
Tetanus	12	7	21	8	17	6	6	4
Trachoma	32	—	62	—	42	—	29	—
Trichinosis	6	—	17	1	33	1	6	—
Tuberculosis (pulmonary)	1,720	684	1,841	667	1,872	670	1,683	677
Tuberculosis (other forms)	352	110	342	116	382	114	338	114
Typhoid fever	139	14	151	27	101	15	120	10
Typhus fever	—	—	2	—	—	—	2	—
Whooping cough	3,575	108	2,022	69	655	21	2,034	109
Suppurative conjunctivitis	992	—	27	—	—	—	—	—
Total	23,213	1,836	20,144	1,885	11,085	1,671	21,356	2,016

* The figures given for 1926 are subject to slight changes in the final compilation.

In connection with the above statistics, it may be observed that neither the general death rate nor infant mortality is at present

showing a tendency to decrease in Boston. This becomes even more noticeable if we go back of the years shown in the above table. The general death rate in Boston in 1921 was 13.5 and the infant mortality the same year 77.3.

The efforts of the Health Department to find an explanation, statistically or otherwise, have thus far been unsatisfactory, but they have served to bring out the danger of drawing erroneous conclusions.

Mortality statistics of Boston are affected to an unusual extent by the deaths of nonresidents. Boston serves as a hospital center for a large part of New England and the Maritime Provinces and, moreover, the nonresident death rate fluctuates curiously. It is also to be remembered that actual census is taken only every five years and estimates for the intervening years made according to the conventional method, have not been found to agree with the increase in population, as shown by actual census.

The downward tendency in Boston infant mortality rate appears to have ceased. Only twice, once in 1921 and again in 1924, has it been less than eighty. Moreover, in 1926, there was a conspicuous increase in deaths suggesting infections of the gastro-intestinal tract, a cause of infant mortality which has been remarkably low in Boston for many years.

Boston's infant mortality rate, like its general death rate, is adversely affected by the fact that Boston is a hospital center. Nearly twenty per cent of the infants under one year who die in Boston are of nonresident mothers. No other large city shows such a proportion of nonresident infant deaths. Nevertheless, this fact does not account for Boston's own practically stationary infant mortality, which is especially noteworthy because of a tendency of the birth rate to decrease. A declining birth rate in a large community may be expected to be accompanied by a decreasing infant mortality and *vice versa*.

Boston's infant mortality has been given considerable study by the Health Department. The local field has appeared to be especially favorable to such a study because of the comparatively low infant death rate from gastro-intestinal infections.

Infant mortality, like the death rate from tuberculosis, may be expected to reflect economic conditions. Boston's infant mortality varies greatly in different parts of the city. In general, it fluctuates with the economic condition of the people, but this is not absolutely true. Race appears to be also a factor and probably there are other factors.

A majority of the deaths in Boston of infants under one year of age are unquestionably due to congenital defectiveness, due to

the failure of the parents to produce offspring capable of living. As death certificates may not specifically ascribe deaths to this cause when so due, close deductions in this matter are impossible, but the studies made by the Health Department would indicate that infant deaths properly to be ascribed to this cause, also vary greatly in different parts of the city and curiously in the same part of the city in different years. While the highest mortality from this cause appears where economic conditions are poor, it does not seem to be a matter entirely of economic conditions, for it is relatively high in a district of the city which by reason of the kind of inhabitants and their economic condition might be supposed to be especially favorable for raising children.

To follow the custom of considering the maternal mortality with infant mortality it is to be observed that the former rate is remarkably constant at about 7 to 1,000 births. This is especially noteworthy because the general tendency of statistics of deaths ascribed to this cause is to decrease, owing to more careful inquiry into real causes of death occurring during the puerperum.

In respect to both maternal mortality and infant mortality as they present themselves in Boston today, it would not seem improbable that a further reduction in either to any great extent must await a better understanding of the unknown biological factors involved.

The statistics for 1926 are most encouraging, with respect to the deaths from communicable diseases, which in most instances are less than last year. In general, the incidence of communicable diseases has been somewhat less, proportionately, than throughout the state.

Typhoid fever deaths have decreased 50 per cent, and the same reduction obtains in deaths from *diphtheria* — a remarkable showing because it is the lowest number of deaths ever recorded from diphtheria in the history of the City of Boston. It is more striking when we consider that not many years ago deaths from this disease were as high as 850 in a single year. The decrease the past few years must be attributed to the intensive work done in diphtheria immunization by this department and it is to be expected that by next year deaths from diphtheria will be even lower.

A close watch kept on certain diseases shows that where the general increase throughout the state was strikingly high during the months of September and October, Boston's increase did not begin until November and has not even yet attained the peak anticipated because of seasonal rise or other cause. While seasonal differences are to be considered, it is felt that these diseases in Boston are kept at low figures because of the immunization and prevention work, as

well as the epidemiological stress that is laid upon each case. The searching for carriers of disease, artificial immunization and the careful observance of quarantine have doubtless been factors in lowering the incident of such diseases.

Deaths from measles during 1926 dropped one half and there have been declines in other communicable diseases such as scarlet fever, influenza, anterior poliomyelitis, encephalitis lethargica and other forms of tuberculosis.

Tuberculosis.— There will be a slight increase in the number of deaths from pulmonary tuberculosis, 680 for 1926 as against 670 for 1925, but it is expected that next year this disease will show a decline. The figures for the past few years have been low comparatively — 677, 670, 667 — and any further declines will be gradual. Meningitis, whooping cough, and cancer show increases, but the work of the Whooping Cough Commission and the state's new cancer program gives hope of a change in the situation.

The reduction in mortality from diphtheria is most gratifying. While it is true that the mortality from diphtheria began to decrease years ago as the disease became more endemic than epidemic in the large American communities, even before antitoxin was discovered, nevertheless the reduction of Boston's deaths from diphtheria to one third of what it was three years ago can have but one explanation, artificial immunization. Moreover, an important fact has been reaffirmed. It is not necessary to secure 100 per cent immunity in order practically to eradicate a communicable disease from a community.

Whooping Cough.— The wide fluctuation in reported deaths from pertussis during the past four years is characteristic of mortality statistics of this disease. Whatever the explanation of these fluctuations may be, it is clearly apparent that whooping cough is today the most serious contagious disease of early childhood. In recognition of this fact, the Health Department is cooperating with a special commission which is studying the disease both with reference to control and treatment and especially as regards its control, information of definite practical value has been brought out. Every possible aid has been offered to the interested workers, who are attempting to secure a vaccine for the prevention and treatment of this disease. Hospitalization has been attempted in all cases where the presence of pneumonia, or other complications have indicated the advisability of this procedure.

Scarlet fever, a disease although still justifiably much dreaded, is continuing to exhibit the mild form which has prevailed here for several years. While considerable artificial immunization is being done, for various reasons artificial immunization against this disease

is not as yet being urged by the Health Department to the same extent as with diphtheria. The use of the serum, which physicians are advised to use, apparently acts almost as a specific in converting the malignant case into a mild one, and probably also lessens the chances of permanent impairment of heart and kidneys. A close watch was kept upon the beds available for this disease in Boston hospitals, so that the department would not find itself with many cases on its hands unable to be hospitalized.

Ophthalmia neonatorum (sore eyes in the newborn) is a disease with which the department has met with great success in its campaign of education. The former frequent necessity for forcibly removing eye cases to the proper hospitals has been greatly reduced, and the assumption by the city of the expense in the care of these cases has resulted in a tremendous saving of eyesight, a fact which obviously lightens the burden of future taxation on the state. The department is always on the alert for these cases, and is fortunate in being able to state that not a single case has suffered from impaired eyesight through its neglect. The follow-up system has resulted in the education of physicians, social workers, nurses and others to notify the department promptly of the existence of such disease.

Typhoid fever is a disease which epidemiological studies in this city have shown comes usually as the result of infection in places outside the city, where the patient has lived or spent vacations. A noticeable fact in regard to typhoid fever in Boston is the absence of secondary cases, owing probably to prompt hospitalization, as well as to the immunization of contacts. Educational publicity makes immunization easier for the department. In this direction the department has also immunized the field force of the large nursing organization, as well as the nurses in hospitals, etc.

Smallpox.— This has been noticeably conspicuous by its absence during the year, especially in view of the fact that the disease has been endemic in various parts of the state and country. Preventive work has been done through the vaccination of nurses and others by the physicians of the department.

Influenza, which has been brought to the attention of the public through the press, did not materialize to an appreciable extent. Careful scrutiny was made of the reported cases, with the result that our belief was firm that these cases were not of the type commonly seen in the epidemic a few years ago. However, this department, through publicity, health education, etc., was warned of the necessary precautions to care for even if not to prevent this disease.

Pneumonia.— The part that pneumonia plays in Boston's mortality and death rate is worthy of serious attention. Pneumonia comes often as the end of the old, the sick, or the debilitated, but

t also kills the young and strong with apparently many years of usefulness before them. Pneumonia is a contagious disease and the experiments at Pittsburgh and Washington would indicate that efforts at its control are justifiable and practicable.

Food poisoning cases are carefully investigated for determining the cause. Cases in a nearby town, at a banquet served by a certain caterer, were also investigated. The same caterer had also served a party of several hundred in this city at the same time, but not a single case of illness occurred. In a large hospital in Boston dysentery appeared, and upon investigation, improper handling of dishes was found to be the probable cause. As a result, a proper sterilization of dishes was brought about.

Rabies is a disease that has 100 per cent mortality, and in which prevention alone is the important factor. This department, through its veterinarian, promptly decides upon the condition of every dog which has bitten an individual. If the dog is well and normal, assurance is given to the patient. If the dog is rabid, the patient is interviewed by a physician of this department and impressed with the absolute necessity of antirabic treatment immediately. The treatment is taken many times at the expense of the department. Fortunately not a single case of human rabies occurred during the year, although thirty-one cases were found of rabid dogs who have bitten individuals.

Venereal diseases is a field in which a great amount of preventive work has been done. A close relationship has been established with the social workers in the various hospitals, courts, probation officers, etc., all of which has been of great value. Education is also being carried out and assistance is offered to individuals in procuring what they most need.

Tuberculosis.— A complete survey of this situation in the city was made, with the result that many cases which had moved out of Boston, died from diseases other than tuberculosis, or that had died in other communities outside of Boston, were removed from the files. This has resulted in our having, at the present time, a "live file" of all actual cases living in Boston, or cases whose residence is in Boston, but who are hospitalized in sanatoria outside of the city.

Anterior poliomyelitis.— This most dreaded disease failed to make an epidemic appearance in this city as was expected.

Deaths from cerebrospinal meningitis are maintaining a curious constancy in Boston year after year with totals so small as to lead people to forget that both these diseases have spread over the world as death-bearing scourges within the last twenty-five years.

Heart disease, as it appears on the above table, includes reported deaths from endocarditis, myocarditis, pericarditis, valvular disease

of heart, and angina pectoris. When combined with chronic nephritis, cerebral hemorrhage and arteriosclerosis, it would seem that the total might be taken for a few years in succession at least as a rough index that the tendency of mortality from degenerative diseases is on the increase in Boston. The failure of deaths in persons over sixty to show an increase out of proportion to probable increase in population suggests that in Boston, as elsewhere, there is an increase in deaths from degenerative diseases, in deaths from worn out human machines, before people even reach three-score years.

Cancer and Diabetes.— While reported deaths from cancer and diabetes are showing no decided tendency to increase, neither are they decreasing. In fact, the one prominent cause of death in Boston which has shown consistent tendency to decrease during the last seven years is pulmonary tuberculosis. Deaths from this condition which had previously been steadily decreasing showed a decided increase during the five years prior to 1918, but since then have resumed their downward tendency.

SOME RECENT CONCLUSIONS REGARDING PNEUMONIA.

Pneumonia is a contagious disease and should be so treated regardless of its particular form or specific cause.

For the practical purposes of controlling a contagious disease in the interest of public health, a "lobar pneumonia" and a "bronchopneumonia" should be treated alike.

A pneumonia develops only in the presence of some of the several different kinds of microscopical organisms or bacteria capable of producing a pneumonia.

Organisms capable of causing pneumonia are spread about directly from patients actually sick with pneumonia or from persons who have been in contact with the sick.

Such organisms are unusually tenacious of life outside the human body, even remaining alive on clothes for several weeks under favorable conditions. Living organisms are found in the floor dust of rooms or wards where pneumonia patients are kept. Apart from patients who are sick or who have been in close contact with patients sick with pneumonia, "carriers" of organisms capable of producing pneumonia are not common.

The organisms often found in people's mouths, indistinguishable under the microscope from pneumonia producing organisms, are usually nonvirulent organisms incapable of producing a pneumonia.

Some constitutional condition or some local abnormal condition of the mucous membrane of the respiratory tract is necessary as well as pneumonia germs in order that a person may develop pneumonia.

A large proportion of cases of pneumonia are preceded by a cold, often what is regarded as a slight cold.

Atmospheric conditions, like irritating dust, bad ventilation, overheated and overdry rooms, cause a condition of the respiratory mucous membranes favorable to the development of pneumonia, provided that the necessary pneumonia organisms be also supplied.

The death rate from pneumonia is about 50 per cent greater in our large cities than in country districts. This is presumably due to fewer opportunities for a person to pick up pneumonia germs in the country than in a crowded city, as well as to worse air conditions in cities.

The United States Army and institutional experience has shown that the spread of pneumonia may be controlled by isolating the sick and adopting precautions similar to those customarily employed in preventing the spread of scarlet fever.

The experience of Pittsburgh, Pa., and Washington, D. C., for the past three years, indicates that a large city may lower its pneumonia death rate by treating pneumonia as a contagious disease. Pittsburgh, whose pneumonia record has been notorious, now requires all forms of pneumonia to be reported to the Health Department, which enforces with respect thereto isolation and terminal disinfection similar to that commonly observed in a case of scarlet fever.

Attendance on the patient is restricted to a single member of the household, but other members are allowed to follow their regular occupations.

INFLUENZA.

It seems justifiable to assume that the infective agent of influenza enters the body as a direct infection of the nose, mouth or throat, and that its transmission may be prevented by the same methods which have been demonstrated to be efficacious in preventing the transmission, for example, of scarlet fever.

It has been conclusively shown that the period of incubation of influenza may be two days, but the possibility that the infective agent of influenza may be carried indefinitely without symptoms, like the meningococci, has not been disproved.

Evidence indicates that a case of influenza is infective before the symptoms appear and ceases to be infective very rapidly after the onset of symptoms.

Precautions, whether in the home or elsewhere, with respect to contaminated hands or eating and drinking utensils or other possible means of carrying infection must, therefore, be begun as routine measures before sickness actually appears, and be applied to persons apparently well.

An uncomplicated case of influenza is characterized by the following clinical features:

A sudden onset with prostration. The patient may feel perfectly well and be off his feet within an hour. There is a general aching of the limbs and a moderate fever, usually lasting less than three days. There are *no catarrhal symptoms* in uncomplicated influenza. Recovery is rapid.

The danger from influenza arises from the fact that, like measles, it produces a susceptibility to other infections. Secondary invaders may be bacteria, like streptococci or pneumococci, for example, which the patient has previously been carrying without harm to himself, or which he acquires from other persons among whom he is placed after being taken sick.

The fundamentals of treatment of influenza are:

First, absolute rest. Clinical experience has clearly demonstrated that strict confinement to bed prevents complications. The value of rest in influenza is as clearly established as of immobilization in case of an infected limb.

The second fundamental of treatment is the isolation of the patient for the patient's own sake — the avoidance of contact with, or exposure to, other persons, the sick or the well, who may transfer to and implant in the patient the organisms of some fatal complication. The frequent impracticability of observing this fundamental has served to emphasize its importance.— *From a report of the Committee on Public Health of the Massachusetts Medical Society, 1926.*

THE SCHOOL CHILD.

A great deal may be done for the school child by the family physician in the way of co-operation with the school physician and school nurses, in pointing out the value of speedily eliminating remediable defects, in that way improving health and doing away with mental retardation.

Cannot the remedy of primary defect, and thereby avoiding a more serious secondary condition, be construed in a measure as preventive medicine, which the general practitioner, by his co-operation, is assisting in practicing?

The general practitioner should point out the value of control of communicable diseases by emphasizing the importance of isolation, the postponement, if possible, for later in the life of the child of contraction of communicable diseases, when the youngster may be older and more able to resist the complications which frequently accompany these conditions; the value of vaccine therapy which may be best exemplified by the control of smallpox with vaccinations, diphtheria with toxin-antitoxin administration, typhoid with antityphoid vaccine, and other controls that we hope will follow.

SURVEY OF THE QUALITY OF BOSTON MARKET MILK.

The following is the result of a survey made of market milk sold in Boston by dealers and chain stores during December. In Massachusetts the statute law requires a minimum of 12 per cent solids and 3.35 per cent butter fat.

Name of Dealer.	Solids.	Fat.	Bacteria. Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Alden Brothers Company	12.66	4.00	16
Allen, Fred H.	12.50	3.85	107
Antetomasso, Peter	12.56	3.95	14
Barron, C. W.	14.18	5.20	12
Bergmann, John H.	12.95	4.20	127
Bolio, William J.	12.99	4.25	33
Brandley, F. J. & P. J.	12.76	4.05	16
Casey, James D.	12.90	4.10	16
Cashin, James F.	12.46	3.95	148
Cedar Hill Farms	13.55	4.65	30
Chapin, George	12.50	3.92	15
Childs Brothers	12.74	4.13	21
Clapp, Frank L.	13.32	4.40	12
Clark, Levi	12.34	3.83	23
Converse, Marquis M.	12.96	4.00	26
Corkery, John H.	12.34	3.77	180
Cosgrove, Martin S.	12.79	3.90	226
Cummings, Francis S., Company	12.19	3.71	17
Cunningham, Paul	12.73	4.08	17
Cusick, William H.	13.01	3.88	466
Dean, Louis W.	13.48	4.75	28
Deerfoot Farm Milk Company	12.78	4.08	13
Denehy, Timothy	13.09	4.40	420
Driscoll, William B., Company	12.76	4.01	19
Duggan Brothers	12.78	3.98	30
Edgerly, Frank S.	12.48	3.90	16
Elm Spring Farm Milk Company	12.43	3.73	27
English, J., & Son	13.18	4.20	45
Ferguson, Malcom D.	13.07	4.06	102
Furbush, A. J.	14.02	4.73	28
Garfield, Mason	14.00	4.72	10
Garvin, Charles E.	13.98	4.75	16
Giroux, J. E. & H. J.	12.62	3.85	48
Griffin, J. L.	12.87	4.03	18

Name of Dealer.	Solids.	Fat.	Bacteria. Thousands In One Cubic Centimeter.
	Per Cent.	Per Cent.	
Gushee, C. W	13.04	4.03	373
Herlihy Brothers	12.73	3.86	62
Hickey, M. J	12.46	3.90	487
Holden, John E	12.52	3.90	20
Hood, H. P., & Sons, Inc	12.47	3.89	34
Hutchinson, F. T	12.24	3.75	13
Jones, William T., Company	12.86	4.06	466
Kendall Brothers	12.46	3.70	600
Kingston, Samuel	13.12	4.18	60
Knapp, George J	12.67	3.81	93
Lang Brothers	12.65	3.80	20
Larson, Charles	12.03	3.68	14
Lincoln Farms	12.07	3.61	28
Lyndonville Creamery	12.86	4.05	70
Manning, Peter	12.42	3.77	28
Maple Farm Milk Company	12.60	3.95	40
McAdams, John F	12.62	3.96	13
McKernan, John	12.37	3.80	15
Millwood Farms	12.36	3.80	25
Munchback, George	12.64	3.91	27
Newton & Pope	13.06	4.30	30
Noble, William F., & Sons	12.92	4.30	60
Robinson, Albert J	12.54	3.86	110
Robinson, J. A	12.42	3.77	48
Schuster, Adam	13.19	4.23	23
Seven Oaks Dairy Company	12.52	3.89	17
Shick, Jacob	12.63	3.87	466
Somerset Farms Milk Company	12.55	4.08	10
Sterling Farms Milk Company	12.71	3.81	19
Stone, H. L	12.60	3.98	26
Stuart, W. E	12.64	4.00	17
Swett, Warren	12.08	3.58	30
Turner Centre System	12.64	3.86	48
United Farmers Co-operative	12.86	4.05	16
Vartanian, S	12.24	3.80	80
Vartanian, K	12.52	3.90	26
Walker-Gordon Laboratory Company	12.76	4.05	8
Weiler, E., & Sons	12.41	3.76	18
Werner Company	12.61	3.87	26

Name of Dealer.	Solids. Per Cent.	Fat. Per Cent.	Bacteria. Thousands in One Cubic Centimeter.
Westwood Farms	12.56	3.78	26
White Brothers	12.84	4.05	24
Whiting Milk Company	12.48	3.82	86
Whittemore, W. D	12.90	4.05	16
Wiswell, George A	12.84	4.04	44
Woodland, Charles L	12.42	3.57	31

CHAIN STORE MILK.

Name of Dealer.	Supplied By.	Solids. Per Cent.	Fat. Per Cent.	Bacteria. Thousands in One Cubic Centimeter.
The Great Atlantic & Pacific Tea Company.	H. P. Hood & Sons, Inc.	12.34	3.75	26
The Cloverdale Company	Turner Centre System, Inc.	12.69	4.03	38
John T. Connor Company	Bellows Falls Co-operative Creamery Company.	12.79	4.01	32
Economy Grocery Stores Company.	Whiting Milk Companies	12.39	3.81	83
The Ginter Company	Ginter Company	13.08	4.06	44
Morgan Brothers Company	Morgan Brothers	13.12	4.27	62
O'Keefe's, Inc	Bellows Falls Co-operative Creamery Company.	12.74	4.03	47
Winer, M	Hyman Winer	12.77	4.10	25

EXAMINATION OF CONDENSED MILK.

One of the functions of the Bureau of Milk Inspection is to investigate condensed milk, and we had this to do recently. Half a dozen specimens of condensed milk were collected and subjected to bacterial analysis. They showed these results:

Number.	Bacteria per Cubic Centimeter.
1	300
2	2,000
3	6,000
4	8,000
5	90,000
6	100,000

These figures are very satisfactory. The bacteria is much less than was found by us in condensed milk a number of years ago.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING DECEMBER, 1926.

Classification.	Number.	Percentage.
After death	4	8.00
Seven days or less	7	14.00
Eight to fourteen days, inclusive	4	8.00
Fifteen to twenty-one days, inclusive	1	2.00
Twenty-two to thirty-one days, inclusive	3	6.00
Within First Month. (Total)	19	38.00
Within second month	3	6.00
Within third month	5	10.00
Within fourth month	1	2.00
Within fifth month	1	2.00
Within sixth month	2	4.00
Within seventh month	1	2.00
Within eighth month	—	—
Within ninth month	—	—
Within tenth month	—	—
Within eleventh month	2	4.00
Within twelfth month	2	4.00
Within First Year Preceding Death. (Total)	36	72.00
Within second year	5	10.00
Within third year	2	4.00
More than three years	7	14.00
Grand totals	50	100.00

SUMMARY OF THE WORK, DECEMBER, 1926.

BUREAU OF ADMINISTRATION.

Prosecutions ordered	6	Personnel:	
Forcible removal	1	Resignation	1
Legal notices	122	Appointments:	
Lying-in Hospitals approved	4	Temporary	3
Hearing on relocation of poultry house	1	Provisional	4
		Permanent	2
		Salary increase	1

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	1,132	Manicure-massage	81
Day nurseries approved	1	Milk	89
Day nurseries disapproved	1	Slaughter house licenses reassigned	2
Denatured alcohol	77	Pedlers	8
Dump licenses renewed	16	Stable permits, temporary	1
Dump approved	10	Undertakers	1
Dump disapproved	3		
Hen licenses	4		

MEDICAL DIVISION.

Visits:		Cases brought to Boston for treatment	125
By medical inspectors	1,664	Deaths investigated	8
By veterinarian	221		
By investigators	352		

NURSING SERVICE.

		Dec.
Homes Visited		14,140
Child Hygiene:		
New cases visited	1,760	
Old cases revisited	9,827	
Total child hygiene visits *		11,587
Communicable Diseases:		
New cases visited	1,291	
Old cases revisited	3,763	
Total communicable disease visits †		5,054
Miscellaneous Visits:		
Infant death investigations		92
Maternal death investigations		9
Patients accompanied to hospital		4
Visits to day nurseries		48
Other special visits		196
Visits to parochial schools		104
Visits to parochial school children		207
Posture visits		89
Nutrition visits		28
Total number of all visits		17,418
Number hours spent in stations by nurses		2,238
Number hours spent in conferences ‡		1,864
Number hours spent in nurses' conference		35

HEALTH UNITS.

Miscellaneous Unit Activities:	
Complaint of insanitary conditions	21
Number of persons given health and other information	484
City visitors	127
Out of city visitors	24
Routine medical examination (adults)	5
Dental Service:	
Number of operations	1,734
Number of children's teeth cleaned	216
Prophylaxis	2,267
Eye Service:	
New cases	38
Number of refractions	118
Number of glasses prescribed	37

* Includes 108 wrong addresses; 1,367 not seen; total, 1,475 absent visits.
† Includes 223 ophtnalmia cases, also 31 wrong addresses; 82 not seen; total, 113 absent visits.
‡ This includes Child Health Conferences, vaccination and diphtheria immunization at stations.

MEDICAL DIVISION OF HEALTH DEPARTMENT:*	
Work performed by medical inspector:	
Visits made by medical inspectors in the districts	420
Vaccinations performed by medical inspectors	34
Number of vaccination certificates issued	27
Antitoxin, antityphoid and toxin-antitoxin administered	32
Number of children examined for day nursiers	248
Nurses' visits:†	
Communicable disease visits by nurses in district	895
CHILD HYGIENE DIVISION OF HEALTH DEPARTMENT:‡	
Number of child health conferences	27
Total attendance at child health conferences	961
New babies at conferences	123
Number of pre-school conferences	37
Home visits to babies and pre-school children	3,321
Infant deaths investigation visits	29
Special visits	2
Number of posture classes	27
Attendance at posture classes	785
BOSTON SANATORIUM:	
Calls made by nurses in the district	1,767
BOSTON LYING-IN HOSPITAL:	
Pre-natal Clinic:	
Number of clinics	8
Attendance	94
New cases	29
COMMUNITY HEALTH ASSOCIATION:	
General Division:	
Home visits by nurses	5,187
BOSTON DISPENSARY:	
Calls by direct physician	60
STATE DEPARTMENT OF MENTAL DISEASES:	
Number of clinics	8
Attendance at clinics	26
Visits of workers	56
New cases	2
American Red Cross, number of classes	6
Attendance at classes	60

MONTHLY REPORT OF VENEREAL DISEASE ACTIVITIES, DECEMBER, 1926.

SYPHILIS.

Under investigation December 1, 1926	34
New cases during December	15
Total	49

* Included in "Medical Division" report.

† Included in "Medical Division" and "Nursing Service" report.

‡ Included in "Child Hygiene Division Report" and "Nursing Service."

Disposition of Cases.

Placed under treatment	15
Unable to locate	16
False address given	13
Under investigation December 31, 1926	5
Total	49
New cases reported by number	15

GONORRHEA.

Under investigation December 1, 1926	52
New cases during December	40
Total	92

Disposition of Cases.

Placed under treatment	32
Unable to locate	25
False address given	18
Further treatment unnecessary	1
Under investigation	16
Total	92
New cases reported by number	219

SUMMARY.

Cases under investigation	86
New cases during	55
Total	141

Disposition of Cases.

Placed under treatment	47
Unable to locate	41
False address given	31
Further treatment unnecessary	1
Under investigation	21
Total	141
Visits by investigator	352

VENEREAL COMPLAINTS AND SOURCES OF INFECTION.

Under investigation December 31	2
New cases	6
Total	8

Disposition of Cases.

Unable to locate	1
Under treatment	2
Treatment not needed	1
False address	1
Under investigation	3
Total	8

CHILD HYGIENE DIVISION.

DECEMBER REPORT OF CHILD HEALTH CONFERENCES.

Station.	Number of Babies.	Number of Preschool.	Total Attendance.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Allston–Brighton.								
Old Town Hall	206	4	210	32	5	37	5	42
31 Lincoln street	74	14	88	6	3	9	5	18
Charlestown.								
Charlestown Municipal Building	192	20	212	23	1	24	9	24
Dorchester.								
Codman Square Library Building	345	42	387	41	9	50	9	43
Columbia Road Municipal Building	429	9	438	41	7	48	9	49
7 Gordon place	156	6	162	20	4	24	4	41
East Boston.								
Health Unit	251	30	281	51	7	58	9	31
Orient Heights	11	1	12	3	0	3	2	6
Hyde Park.								
Hyde Park Municipal Building	100	11	111	9	0	9	4	28
Jamaica Plain.								
Curtis Hall Municipal Building	164	18	182	15	7	22	5	36
North End.								
41 North Margin street	202	106	308	42	19	61	9	34
Roslindale.								
Roslindale Municipal Building	102	10	112	12	3	15	4	28
Roxbury.								
Beth Israel Hospital	161	15	176	17	1	18	5	35
Children's Hospital	109	8	117	22	3	25	4	29
1049 Columbus avenue	202	19	221	34	4	38	9	25
Vine Street Municipal Building	131	5	136	23	5	28	4	34
South Boston.								
140 Dorchester Street	203	22	225	40	11	51	9	25
South End.								
70 Emerald street	111	27	138	7	6	13	5	28
640 Harrison avenue	58	4	62	5	0	5	5	12
46 Lovering street	68	21	89	7	3	10	4	22
Shawmut Avenue Municipal Building,	98	7	105	12	1	13	4	26
122 Tyler Street	51	9	60	6	0	6	4	15
West End.								
17 Blossom street	320	52	372	30	11	41	9	41
Totals	3,744	460	4,204	498	110	608	136	29.2

REPORT OF TOXIN-ANTITOXIN ADMINISTRATIONS AND VACCINATIONS AT CHILD HEALTH CONFERENCES DURING DECEMBER, 1926.

Station.	Toxin-Antitoxin Administrations.	Vaccinations.
Old Town Hall, Brighton	24	0
31 Lincoln street, Brighton	26	0
Charlestown Municipal Building	10	1
Codman Square Library Building	66	0
Columbia Road Municipal Building	31	0
7 Gordon place, Dorchester	17	4
East Boston Health Unit	10	2
Orient Heights	0	0
Hyde Park Municipal Building	6	2
Curtis Hall, Jamaica Plain	39	3
41 North Margin street	105	0
Roslindale Municipal Building	27	4
Beth Israel Hospital	23	0
Children's Hospital	0	0
1049 Columbus avenue	33	5
Vine Street Municipal Building	20	3
140 Dorchester street	29	5
70 Emerald street	3	0
640 Harrison avenue	12	1
46 Lovering street	16	2
Shawmut avenue	8	0
122 Tyler street	21	1
17 Blossom street	41	3
Totals	567	36

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

	Dec.
Stores inspected	5,882
Sanitary defects remedied	88
Complaints at office	34
Referred to Sanitary Division	21
Notices to abate nuisances	98
Court cases	6
Pending	6
Applications for pedlers' licenses approved	8
Vehicles inspected and approved	427
Laboratory Examinations:	
Bacteriological	3
Chemical	4

CONDEMNATIONS.

Meats:		Tomatoes	459 crates
Bacon	11 pounds	Tomatoes	30,910 pounds
Beef	6 pounds	Fruit:	
Duck	13 pounds	Apples	4 cases
Goose	5½ pounds	Bananas	4 dozen
Liver	10 pounds	Dates	300 pounds
Pork	17 pounds	Figs	51 boxes
Poultry	26¾ pounds	Grapes	1 bushel
Sausage	200 pounds	Peaches	13 cans
Tongue	12 jars	Prunes	7 pounds
Turkey	367½ pounds	Miscellaneous:	
Smoked haddock	3 pounds	Mustard pickles	½ keg
Vegetables:		Olives	6,000 pounds
Beans	50 pounds	Chicory	27 barrels
Potatoes	38,000 pounds	Egg, white	10 pounds
Squash	12,500 pounds	Egg, yolk	10 pounds
Tomatoes	273 cans		

LIVE STOCK INSPECTION (Brighton Abattoir).

Cattle inspected	44	Parts condemned (lbs.)	487
Calves inspected	940	Animals condemned	12
Swine inspected	4,722		

DAIRY DIVISION.

Total inspection	2,093	Total cattle inspected	4,987
Dairies inspected	327	Inspections of milk plants and licensed dealers	403
Scoring above 50 *	257	Bacteriological examinations	530
Scoring below	70	Country creamery inspections	4
With milk rooms	237	Sediment tests	816
Without milk rooms	90		
Inactive	1		

* Passable mark.

BUREAU OF MILK INSPECTION.

SAMPLES EXAMINED.

CHEMICAL:	
Milk for typhoid fever	16
Milk from wagons	260
Milk from stores	1,024
Milk brought by citizens	6
Vinegar	56
Whiskey	7
Drugs	2
Dyes	1
Salad oil	2
Bottles	5
Caps	6
BACTERIOLOGICAL:	
Milk	645
Ice cream	41
Court cases	7
Fines	$285

SANITARY INSPECTION.

Original inspections	1,473	Legal notices served	135
New reports	1,942	Complaints investigated	438
Reinspections	6,988	Vacate notice served	1

BACTERIOLOGICAL LABORATORY.

Diphtheria	1,263
Tuberculosis	219
Typhoid	97
Gonorrhea	789
Gonorrheal ophthalmia	57
Syphilis	1,280
Other examinations *	27
Bacteriological examinations of milk	645
Bacteriological examinations of ice cream	41
Milk bottles examined	5
Milk bottle caps examined	6
Milk for typhoid	16
Swimming pools examined	60
Shellfish examined	8
Ice cream examined	1

* Malaria, 2; feces for typhoid, 5; urine for typhoid, 5; genito-urinary tuberculosis, 3; dark field, 4; smears for Vincent's angina, 2; oil for streptococci, 2; dog's heads for rabies, 3; feces for hookworm, 1.

TYPHUS FEVER.

A report of Dr. Kenneth F. Maxcy, Passed Assistant Surgeon, United States Public Health Service, published in "Public Health Reports" for December 24, 1926, brings out the fact that the type of typhus fever often referred to as "Brill's disease" is prevalent in North and South Carolina, Georgia and Florida.

In his study of the disease, as it ordinarily presents itself in these states, Doctor Maxcy has become satisfied that the disease must be spread in some other way than by lice which have become infective by feeding on human beings sick with the disease.

In view of the analogy of typhus fever to plague, Rocky Mountain spotted fever and other diseases of the group which has come to be referred to as "rickettsias," and after considering circumstantial evidence, including the demonstrated susceptibility of rodents to typhus fever, Doctor Maxcy suggests the following in explanation of the prevalence of typhus fever in that part of the country: "It is suggested as an hypothesis which seems to afford a more probable explanation of the mode of transmission, that a reservoir exists elsewhere than in man, and that this reservoir is in rodents, probably rats or mice, from which the disease is occasionally transmitted to man."

VITAL STATISTICS, DECEMBER, 1926.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING DECEMBER, 1926, WITH COMPARATIVE FIGURES FOR DECEMBER, 1925.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1926.	1925.	Increase or Decrease.	1926.	1925.	Increase or Decrease.
All Causes:						
Total deaths	**993**	1,044	—51	**15.14**	16.00	—.86
Nonresidents deducted	**822**	864	—42	**12.53**	13.24	—.71
By Age:						
Under one year	**121**	118	+3	**1.84**	1.81	+.03
One year to four years, inclusive	**42**	63	—21	**.64**	.96	—.32
Sixty years and over	**401**	439	—38	**6.11**	6.73	—.62
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	**53**	69	—16	**.81**	1.06	—.25
Arteriosclerosis	**35**	39	—4	**.53**	.60	—.07
Heart disease	**204**	220	—16	**3.11**	3.37	—.26
Nephritis, chronic	**65**	54	+11	**.99**	.83	+.16
Infant and Maternal Mortality:						
a. Total registered live births	**1,105**	1,520	—415	**16.84**	23.29	—6.45
b. Registered stillbirths	**37**	53	—16	**.56**	.81	—.25
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	**37.40**	33.69	—1.29
c. Deaths of mothers from causes incident to childbirth	**9**	7	+2	**.14**	.11	+.03
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	**7.88**	4.45	+3.43
Deaths of children in first year of life	**121**	118	+3	**1.84**	1.81	+.03
Deaths in first year per 1,000 live births,	.....	.....	.....	**109.50**	77.63	+31.87
Violence:						
Accidents	**55**	61	—6	**.84**	.93	—.09
Homicides	.....	2	—2	.....	.03	—.03
Suicides	**8**	9	—1	**.12**	.14	—.02
Miscellaneous:						
Alcoholism, acute or chronic	**12**	19	—7	**.18**	.29	—.11
Broncho-pneumonia	**62**	56	+6	**.94**	.86	+.08
Cancer	**109**	98	+.11	**1.66**	1.50	+.16
Cirrhosis of the liver	**8**	4	+4	**.12**	.06	+.06
Diabetes mellitus	**13**	12	+1	**.20**	.18	+.02
Diarrheal diseases, children under two years of age	**9**	8	+1	**.14**	.12	+.02

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1926.	1925.	Increase or Decrease.	1926.	1925.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	2	6	—4	.03	.09	—.06
Deaths.	—	—	—	—	—	—
Cerebrospinal meningitis.....Cases..	3	4	—1	.04	.06	—.0
Deaths.	1	1	—1	.015	.015	—
Diphtheria.....Cases..	162	90	+72	2.47	1.38	+1.09
Deaths.	8	9	—1	.12	.14	—.02
Influenza.....Cases..	14	12	+2	.21	.18	+.03
Deaths.	6	6	—	.09	.09	—
Measles.....Cases..	64	681	—617	.97	10.43	+9.46
Deaths.	2	16	—14	.03	.24	—.21
Pneumonia (lobar).....Cases..	138	194	—56	2.10	2.97	—.87
Deaths.	48	54	—6	.73	.83	—.10
Scarlet fever.....Cases..	357	252	+105	5.44	3.86	+1.58
Deaths.	3	4	—1	.04	.06	—.02
Tuberculosis (pulmonary).....Cases..	116	135	—19	1.77	2.08	—.31
Deaths.	50	50	—	.76	.76	—
Tuberculosis (other forms).....Cases..	29	24	+5	.44	.37	+.07
Deaths.	9	5	+4	.14	.08	+.06
Typhoid fever.....Cases..	36	5	+31	.55	.08	+.47
Deaths.	1	1	—	.015	.015	—
Whooping cough.....Cases..	103	240	—137	1.57	3.68	—2.11
Deaths.	2	7	—5	.03	.11	—.08

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1926 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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HEALTH PROGRAM IN THE PAROCHIAL SCHOOLS OF THE CITY OF BOSTON.

The health of children interests all educators. The protection of child health is a feature of public school instruction. The sound mind in the sound body is likewise an accepted principle in Catholic education. By reason of the much greater number of public school children official efforts to safeguard their health are constantly before us. It is not so generally realized that in the parochial school organization of Boston there has been a clear and definite appreciation of the responsibility of the school in safeguarding and developing the physical life of growing children.

(1.) In the fall of 1915 the Cardinal Archbishop of Boston directed the parish priests of the archdiocese to provide a medical inspector for each parochial school, "wherever the local public health authorities did not undertake this service for children in Catholic schools." At the present time the children in attendance at each parochial school in the City of Boston have the services of a school physician selected by the parish priest of the parish

in which the school is located. The work of the school physician is to examine the school children at regular intervals to safeguard their health and to assist the teaching staff of the school in the solution of the health problems which arise from day to day.

(2.) In September, 1920, the St. Apollonian Guild of Catholic dentists was organized in Boston. The great objective of this group of nearly three hundred representative dentists of greater Boston is to give their services voluntarily for the benefit of pupils in attendance at parochial schools. The Forsyth Dental Infirmary for Children co-operates in this work by offering to the members of the Guild its facilities for caring for the dental health of parochial school children. Plans are now under way to use in addition to the Forsyth Dental Infirmary the facilities of the Carney and St. Elizabeth's Hospitals.

The doctors of the Guild visit the parochial schools once a year to examine the mouth conditions of every pupil. After the examination the cases are classified. On different days a motor bus owned by the Guild is sent to one of the schools of the city to convey the children to the infirmary and later to return them to their school.

During the school year 1925–26, the teeth of all parochial school children were examined by the members of the Guild of St. Apollonia. In the cases of 11,150 children needing treatment the following services were rendered to these children: 2,132 had extractions performed, 5,699 had fillings made and 3,319 presented themselves for prophylaxis.

In order to encourage preventive dentistry, the members of the Guild of St. Apollonia conducted last year a prize essay contest for the sixth grade children of parochial schools in the City of Boston. This represented one of the many educational efforts made by the members of the Guild to improve oral health among parochial school children.

(3.) The parochial schools of the City of Boston were pioneers in Schick testing and toxin-antitoxin immunization. The "Boston Year Book" for 1924–25 (page 109) gives the following figures, which show the work done in the parochial schools of Boston up to January, 1925.

Schick Toxin-Antitoxin Diphtheria Prevention Activities.

PAROCHIAL SCHOOLS AND INSTITUTIONS.

Tests.	Readings.	Positive.	Positive Combined.	Pseudo.	Negative.	First T. A.	Second T. A.	Third T. A.
37,893	36,304	16,130	1,973	4,758	12,443	17,044	15,077	13,809

Tests.	Readings.	Positive.	Positive Combined.	Pseudo.	Negative.	First T. A.	Second T. A.	Third T. A.
11,261	10,709	1,350	155	1,666	7,538	1,389	1,200	1,071

(4.) Hearty co-operation was given by parochial schools in the City of Boston to the inauguration of the ten-year health program conducted under the direction of the State Department of Health. The work of weighing and measuring the children of parochial schools was carried on under the direction of nurses of the Health Department of the City of Boston. During the school year 1925–26, 14,657 children in the parochial schools of the City of Boston were weighed and measured. At the present time the work of examining and weighing parochial school children has been practically completed so that now nearly every parochial school child has been weighed and measured.

(5.) For the past five years a special vacation house for sickly and undernourished children has been conducted at Nantasket Beach under the auspices of the Catholic Charitable Bureau. Last year 617 children, mostly from parochial schools of the City of Boston, were accommodated at this vacation house. In addition, four of the larger parishes of the city have their own summer camps at which children in need of rest and nourishment are accommodated during the summer months.

(6.) The health program in the parochial schools of the City of Boston carefully provides for the formation and development of sound health habits. A definite course of study, prescribed for all schools, presents in detail physical exercises which are to be a part of the school program. Every large school in the City of Boston employs a specialist in physical education to direct teachers and pupils in this work. Cfr. Diocesan Course of Study, page 149 *seq.*

The "Diocesan Course of Study" also defines very carefully the work in physiology and hygiene. The emphasis is on the formation of health habits in everyday life. The parochial school child is taught to care for his body intelligently and to safeguard it scrupulously against the inroads of disease. Cfr. Diocesan Course of Study, page 143 *seq.*

(7.) During the school year 1925–26 13,255 pupils were enrolled in the Modern Health Crusade conducted by the Boston Tuberculosis Association. A special representative of the crusade devotes all of her time to the parochial schools of the City of Boston.

(8.) For some years past the New England Dairy and Food Council has carried on an active campaign among the parochial

school children of the City of Boston. This organization, the object of which is "to promote health and economy by the increased use of dairy products," is most enthusiastic of the success it has achieved in the parochial schools of Boston. A special representative of the Dairy and Food Council devotes all of her attention to the parochial schools of the City of Boston.

Arrangements now exist with many of the milk distributors of the city whereby milk is served twice a day at a nominal cost to parochial school children.

(9.) One of the factors contributing greatly to the successful promotion of health work among parochial school children in the City of Boston is the confidence that parents have in the suggestions of the religious teachers of parochial schools. Once a religious teacher asks for the consent of a parent to something that is going to be of physical betterment to the individual child, the consent is immediately given. This confidence reposed in the religious teachers by the parents of parochial school children explains the facility with which public health programs, such as the Shick test, can be successfully carried out among parochial school children.

It must also be noted that each parochial school is an integral part of an individual parish organization. The religious teachers live close to the school. They have dedicated their lives to the cause of education. They have no other interest to distract them from the care of the children entrusted to their care. For this reason they are always available for service to their children.

In each parish a priest is definitely assigned to assist in the work of the school. His duty, among others, is to establish the closest possible connection between the parents and the school.

The personal nature of the parish organization of which the parochial school is a part makes it possible to secure a greater measure of follow-up work in all health programs than is possible when such an organization is lacking.

MASSACHUSETTS ASSOCIATION OF BOARDS OF HEALTH MEETINGS.

The annual meeting of the Massachusetts Association of Boards of Health was held at the Twentieth Century Club on January 27. After the business meeting and the report of the Executive Committee the association was addressed by Dr. James S. Stone, president of the Massachusetts Medical Society, whose interesting paper, "The Medical Profession and the Cancer Problem," was well received. Speaking for the profession he stated that the physicians were fully organized in support of the cancer campaign and had pledged themselves to support the different cancer clinics that were

being organized in different sections of the Commonwealth. He mentioned that the medical profession were highly pleased with the fact that the State Department of Health were endeavoring to secure from the Legislature the privilege of purchasing radium to be used in the treatment of cancer cases. It was felt that radium so purchased and controlled would render the greatest service and be of most value under such control. Dr. George H. Bigelow, state commissioner of health, spoke on "What the State proposes to do in Regard to Cancer." The State Hospital for Cancer, he stated, is expected to be ready in a few weeks, and he elaborated on the great necessity of hospitalizing the hopeful cases, quoting one authority as having stated that each month's delay from the treatment of cancer nullified the chances of recovery 16 per cent. He also described the organizations that were being established, and also, that they were seeking the services of civic organizations to co-operate with the local boards of health and medical fraternity in the creation of interest in the cancer clinics to be established. Doctor Bigelow also stressed the importance of the passage of legislation which would seek to control typhoid fever "carriers" engaged in the handling of foodstuffs. Homer N. Calver, secretary of the American Public Health Association from New York, was a guest of the association and spoke of the importance of co-operation of health officials and the great need of co-ordination in health legislation. Many bills affecting public health and now before the United States Congress will be heard in committee early in February and he urged upon the members their undivided support. These matters proved of such interest to the many members that they opened up an active discussion among the members present.

Officers elected for the coming year, 1927, were as follows:
John J. McGrath, Salem, *President.*
Dr. M. Victor Safford, *First Vice President.*
J. U. Paquin, *Second Vice President.*
Dr. Francis George Curtis, Newton, *Treasurer.*
Stephen L. Maloney, Boston, *Secretary.*

Joint Committee Meetings.

A meeting of the joint committee — Executive and Legislative— of the Massachusetts Association of Boards of Health was held at the St. Botolph Club on February 3 to consider bills affecting the public health and now before the Massachusetts Legislature. The joint committee went on record as to the merits of these bills, and a circular letter is being sent to all members of the association urging them to seek the co-operation of their local representatives in the proper disposition of all such measures affecting the public health.

PNEUMONIA QUARANTINE.

February 9, 1927.

To Physicians.

Your attention is called to the relative mortality (all forms) of pneumonia in Boston and Pittsburgh for the past four years as shown in the accompanying table. In Pittsburgh an effort has been made during this period to apply our present knowledge to prevent the spread of this disease. I would also take this opportunity to state that the number of physician's certificates of deaths from lobar pneumonia filed in the Boston Health Department is so large in comparison with the number of cases of lobar pneumonia reported to the department as to suggest that lobar pneumonia is not being reported by physicians as required by law.

In making comparisons it will be well to remember that in Boston only lobar pneumonia cases are quarantined. Bronchopneumonia is not a reportable disease and therefore is not quarantined. The figures given in this table include all pneumonia deaths in Boston and for this reason are comparable with the figures for Pittsburgh, which figures are for all pneumonia deaths as well.

PNEUMONIA DEATHS, ALL FORMS, AND DEATH RATE PER 100,000.

Year.	Pittsburgh, Pa.		Boston, Mass.	
	Deaths, All Forms.	Death Rate.	Deaths, All Forms.	Death Rate.
1923	2,295	371	1,313	170
1924	2,074	331	1,024	132
1925	1,688	264	1,181	151
1926	1,255	197	1,282	163

For Pittsburgh there was no quarantine for pneumonia in 1923, but beginning April 1, 1924, and since that date, quarantine has been maintained.

BARBER SHOP REGULATIONS.

The following regulations concerning barbers and barber shops have been promulgated by the Health Commissioner, and a copy printed on cardboard, 10 inches by 16 inches, distributed to each shop. Previous regulations affecting this business have been rescinded.

1. All barber shops, together with all furniture, equipment, tools, utensils, floors, walls, and ceilings shall at all times be kept in a clean and sanitary condition. No part of such shop, or of any room or rooms opening directly into such shop, shall be used for sleeping purposes, or contain any bed or couch.

2. Continuous hot and cold running water must be provided in each establishment.

3. The head rest on each chair must be provided with a clean towel or sheet of clean paper for each patron.

4. Two receptacles must be provided for each barber. Used shaving papers must be deposited in one, and used towels in the other.

5. Cuspidors shall be cleaned every night and a disinfectant solution left in them at all times.

6. Mugs, brushes, razors, scissors, clippers, tweezers, combs, rubber discs, and parts of vibrators, and all other utensils and appliances that come in contact with the head or face must be immersed in boiling water for at least two minutes, or in other satisfactory disinfectant solution, and rendered aseptic after each patron.

7. A towel that is used on a patron shall not be used again on another patron until relaundered.

8. The use of powder puffs, finger bowls, sponges, styptic pencils, and lump alum is prohibited.

9. No shaving brush shall be used unless it bears the trade mark or name of the manufacturer.

10. Soaps, bay rum, face lotions, hair tonics, and other toilet articles, and all solutions must be of good quality.

11. Barbers who are afflicted with tuberculosis, venereal, parasitical or other communicable disease must not practice the barber trade.

12. Barbers must not attempt to remove warts, moles or ingrowing hairs, pimples or black heads or treat any disease of the skin of a patron.

13. Extreme care must be taken by the barber, after serving a patron with a skin disease or skin eruption, to thoroughly cleanse his hands and tools in hot water and soap or other sterilizing solution. His hands should be thoroughly cleansed after serving a patron, and after handling money, and his finger nails kept short and clean.

14. Patrons of this shop will co-operate by calling to the attention of the proprietor of this establishment or the Health Department any violation of the foregoing regulations.

FRANCIS X. MAHONEY, M. D.,
Health Commissioner.

January 3, 1927.

Penalty for violation $100.

This card must be posted in a conspicuous place in the barber shop.

HEALTH COMMISSIONER STATES POSITION OF PRACTICING PHYSICIANS IN PREVENTIVE MEDICINE.

The Commissioner of Health of the State of New York in his address to the health officers and nurses of New York State at the 25th annual conference of health officers and 8th annual conference of public health nurses, stressed the importance of the practicing physicians in the field of preventive medicine. The following are extracts from Doctor Nicoll's address:

The first, last and whole duty of a public health official lies in the field of preventive medicine and hygiene. He cannot escape or abrogate that duty to others without breaking his oath of office. This does not mean that all of the work, or indeed a major part of it, can and should be performed solely by official agencies. Those who talk so glibly of the coming of so-called "State Medicine" meaning, I take it, that the state and its constituted political divisions shall assume the whole and direct responsibility for the physical welfare of each individual citizen, need only estimate the approximate cost of such an undertaking and the utter impossibility of recruiting the great army of qualified persons who would be required to perform the work, in order to be convinced of the impracticability of such a plan. In my opinion, it will never be attempted in this country unless or until the general medical profession is unable or unwilling to qualify itself in and practice the principles of preventive medicine with consequent neglect of those who look to it for professional advice. . . .

The adoption and utilization, by the medical profession, of well-proven procedures for the prevention of disease which have been urged upon the general public by official and nonofficial public health agencies, require no special training by any competent and up-to-date physician. How large a part has the general medical profession played in this work, so indispensable to the protection of the public health? Let me illustrate: Vaccination against smallpox has long since come to be regarded as a function of public health and school authorities, and as a consequence throughout a large part of this country, vaccination is no longer done as a routine procedure. Were it not for the compulsory vaccination law affecting the larger cities and the power given to the State Commissioner of Health to certify to the existence of outbreaks of smallpox, this state, continually threatened by the disease from the north, south and west, would be constantly over-run by smallpox as are a number of other states of the Union.

Inoculation against typhoid fever, except in time of war, is rapidly coming into disuse even in the case of groups and individuals

who, by extensive travel or by abode in places where typhoid prevails, are specially liable to exposure.

The campaign for periodic medical examinations has been under way for several years. It has been advocated by public health authorities, nonofficial health organizations and insurance companies, and widely indorsed, in principle at least, by the medical profession. Among a few medical groups, in association with unofficial health agencies and notably in the case of at least one medical institution founded frankly as a commercial though laudable enterprise, the campaign up to the present time may be deemed a success; but it would be very difficult to become enthusiastic over the part taken in it by the medical profession as a whole.

Finally, the antidiphtheria campaign, launched under impressive auspices and widely heralded under the slogan "No diphtheria in New York State by 1930," has been under way for some months. Much excellent publicity material has been scattered broadcast. The State Medical Society and its constituent county societies have generally indorsed it. The state and local departments of health, boards of education, nonofficial health organizations and insurance companies have done their part. I believe that the results are already evidenced by the remarkable fall that has taken place in the morbidity and mortality rates from diphtheria not only in this state but elsewhere in the country where a similar campaign has been actively carried on. How large a share has the general medical profession taken in this work? From official reports received by the State Department of Health, from district state health officers and local health officers and innumerable personal interviews with practicing physicians, I am prepared to state without fear of contradiction that up to the present time the great majority of the members of the medical profession have done little or nothing to bring about immunization against diphtheria among their private patients. . . . It is hardly conceivable that the general immunization of children of preschool age can be achieved, to any great degree, unless general practitioners make themselves responsible for immunization among their own patients, or such of them as are willing to have it done. I have tried faithfully to determine why the general practitioner has seemed to show indifference or hesitancy to take an active part in health campaigns and utilize, as a matter of routine, established preventive procedures. Many reasons have been given, but the commonest, and I fear the most difficult to overcome, is the hesitancy and delicacy on the part of our best practitioners to take any action among their patients which would seem to leave them open to the charge of commercialism by seeking to increase their practice. There is further a question of so-called

medical ethics which apparently deters many physicians from sending for their patients, notwithstanding the fact that they should be seen and advised as to conditions which require medical attention. This attitude of mind is not to be sneered at nor lightly cast aside; but I submit that it must be abandoned from sheer necessity if the medical profession is to do its full share in the work of preventive medicine, and I firmly believe that the general practitioner is not doing his full duty to his clientele if he does not keep constantly in touch with their physical condition, growth, development and protection against infection. This cannot be done unless physicians in general will follow the example of a few of their number who regularly adopt the practice of sending for their patients at such intervals as they deem necessary for physical examination, regulation of the diet, habits of living, vaccination against smallpox, typhoid fever, when deemed necessary, and immunization against diphtheria; and I venture to predict that by so doing, physicians who have the confidence of their patients will find that confidence increased and their reputation for ethical practice untarnished. The gratitude of those who will appreciate the interest shown in their condition and the results which are certain to be evident in many cases, will more than outbalance the opinion of the few pettyminded individuals who will see nothing but ulterior motives and selfishness.

(*Health News, New York State Department of Health.*)

SURVEY OF THE QUALITY OF BOSTON MARKET MILK.

The following is the result of a survey made of market milk sold in Boston by dealers and chain stores during January, 1927. In Massachusetts the statute law required a minimum of 12 per cent solids and 3.35 per cent butter fat.

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Alden Brothers Company	12.83	4.11	31
Allen, Fred H.	12.36	3.70	80
Antetomasso, Peter	12.67	3.87	14
Barron, C. W.	14.26	5.00	10
Bergmann, John H.	13.11	4.28	89
Bolio, William	13.48	4.57	24
Brandley, F. J. & P. J.	12.70	4.00	28
Casey, James D.	13.42	4.55	30

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Cashin, James F.	12.37	3.86	42
Cedar Hill	13.70	4.70	19
Chapin, George	12.46	3.85	18
Childs Brothers	12.86	4.16	26
Clapp, Frank L.	12.88	4.15	10
Clark, Levi	12.40	3.91	22
Converse, M. M.	12.95	4.02	56
Corkery, J. J.	12.38	3.66	180
Cosgrove, Martin S.	13.11	4.17	200
Cummings, F. S.	12.13	3.72	30
Cunningham, Paul	12.48	3.97	16
Cusick, W. H.	12.88	4.07	60
Dean, Louis W.	13.42	4.52	22
Deerfoot Farm	12.64	4.01	20
Denehy, Timothy	13.02	4.22	38
Driscoll, William B., Company	12.66	3.91	26
Duggan Brothers	12.86	3.83	36
Edgerly, Frank S.	12.53	3.85	112
Elm Spring Farm	12.12	3.76	350
English, J., & Son	12.96	3.92	70
Ferguson, M. D.	12.72	3.70	193
Furbush, A. J.	14.53	5.17	18
Garfield, Mason	15.00	5.70	14
Garvin, C. E.	14.66	5.50	338
Giroux, J. E. & H. J.	12.61	3.85	19
Griffin, Joseph L.	12.93	3.98	17
Gushee, C. W.	13.10	4.17	128
Herlihy Brothers	12.63	3.93	127
Hickey, Martin J.	12.55	3.85	22
Holden, John E.	12.66	4.00	90
Hood, H. P., & Son	12.35	3.73	48
Hutchison, F. T.	12.25	3.70	14
Jones, William T., Company	12.76	4.07	22
Kendall Brothers Company	12.40	3.80	142
Kingston, Samuel	13.24	4.25	44
Knapp, George J.	12.98	3.93	125
Lang Brothers	12.52	3.75	30
Larson, Charles	12.45	3.67	13

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Lincoln Farms	13.13	4.35	17
Lyndonville Creamery	12.94	4.01	28
Manning, Peter	12.35	3.80	21
Maple Farm Milk Company	12.36	3.65	124
McAdams, J. F.	12.66	3.95	10
McKernon, John	12.34	3.76	34
Millwood Farms	12.53	3.88	366
Munchback, George	12.74	3.95	40
Newton & Pope	13.27	4.38	32
Noble, William F., & Co	12.88	4.12	11
Robinson, A. J.	12.60	3.78	34
Robinson, J. A.	13.00	3.97	40
Schuster, Adam	12.92	3.88	19
Seven Oaks	12.57	3.86	16
Shick, Jacob	12.25	3.70	80
Somerset Farms	12.80	3.87	10
Sterling Farms Milk	12.58	3.75	31
Stone, Howard L.	12.41	3.90	16
Stuart, W. E.	12.64	3.96	19
Swett, Warren J.	11.81	3.40	453
Turner Centre System	12.79	4.00	42
United Farmers' Co-operative Creamery Company	13.00	4.05	15
Vartanian, S.	12.42	3.75	24
Vartanian, K.	12.68	4.15	14
Walker-Gordon	12.90	4.26	10
Weiler, E., & Sons	12.51	3.85	84
Werner Company	12.42	3.85	46
Westwood Farms	12.57	3.70	26
White Brothers	12.98	4.05	16
Whiting Milk Company	12.39	3.77	40
Whittemore, W. D.	13.10	4.06	17
Wiswall, G. A.	12.92	4.10	46
Woodland, Charles L.	12.62	4.17	32

NOTES.

In New York State the powers and duties of the State Board of Embalming have been transferred to the State Department of Health.

"It is better to write of laughter than of tears, since laughter is the natural function of man." — *Rabelais.*

CHAIN STORE MILK.

Name of Dealer.	Supplied By.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
		Per Cent.	Per Cent.	
The Great Atlantic & Pacific Tea Company.	H. P. Hood & Sons, Inc....	12.35	3.85	18
The Cloverdale Company.....	Turner Centre System, Inc.	12.58	3.90	27
John T. Connor Company.....	Bellows Falls Co-operative Creamery Company.	12.67	3.98	21
Economy Grocery Stores Company.	Whiting Milk Company....	12.21	3.81	18
The Ginter Company.....	Ginter Company.....	12.82	4.00	16
Morgan Brothers Company....	Morgan Brothers.....	12.96	4.23	18
O'Keefe's, Inc.....	Bellows Falls Co-operative Creamery Company.	12.71	4.01	29
M. Winer.....	H. Winer.....	12.76	3.88	28

UNITED STATES FAR BEHIND EUROPE IN FIGHT AGAINST SMALLPOX.

Specialists Urge Universal Vaccination.

The Health Section of the League of Nations, in a report just issued, states that smallpox "is becoming increasingly rare on the continent of Europe." The majority of cases in Europe, it is pointed out, are found in England where 748 cases were reported for the months of August and September last.

In the United States, more than 27,000 cases of smallpox were reported during the first ten months of 1926. Though the figures for the entire year, when tabulated, will doubtless show a reduction in the number of cases over the two preceding years, the United States will still occupy an unenviable position, compared with European countries, so far as smallpox prevalence is concerned.

As a timely warning to the public and to those responsible for protecting the health of the public, the American Dermatological Association, at its recent annual meeting, adopted the following resolution:

"*Whereas*, Smallpox has been prevalent in various parts of the country for several years, and has assumed a malignant type with a mortality of 50 per cent in some places, and

"*Whereas*, This disease can be effectively prevented by the simple and harmless expedient of vaccination,

"*Therefore*, The importance of maintaining and continuing an active campaign of vaccination is urged on all public health authorities, and legislative bodies are urged to provide the necessary legal authority for universal vaccination."

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING JANUARY, 1927.

Classification.	Number.	Percentage.
After death	4	9.09
Seven days or less	5	11.36
Eight to fourteen days, inclusive	—	—
Fifteen to twenty-one days, inclusive	1	2.27
Twenty-two to thirty-one days, inclusive	1	2.27
Within First Month. (Total)	11	24.99
Within second month	6	13.63
Within third month	2	4.55
Within fourth month	1	2.27
Within fifth month	3	6.82
Within sixth month	3	6.82
Within seventh month	2	4.55
Within eighth month	1	2.27
Within ninth month	2	4.55
Within tenth month	—	—
Within eleventh month	2	4.55
Within twelfth month	1	2.27
Within First Year Preceding Death. (Total)	34	77.27
Within second year	3	6.82
Within third year	2	4.55
More than three years	5	11.36
Grand totals	44	100.00

SUMMARY OF THE WORK, JANUARY, 1927.

BUREAU OF ADMINISTRATION.

Legal notices	146	Personnel:	
Prosecutions ordered	2	Leave of absence	2
Contract awarded	1	Designations changed	4
Stable hearings	1	Appointments, permanent	2
Regulations promulgated	1	Appointment, provisional	1
Forcible removals	2	Temporary appointment terminated	1
Personnel:		Transfers	3
Resignation	2		

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	1,142	Manicure-massage	79
Day nurseries	5	Milk	121
Denatured alcohol	16	Offensive trades	1
Dump, approved	16	Pedlers	16
Dumps refused	2	Stable permits, temporary	1
Hen licenses	4	To keep goat	1
Hen licenses refused	1	Undertaker's license reissued	1

MEDICAL DIVISION.

Visits:		Nurses, Schick activities*	
By medical inspectors	1,728	Cases brought to Boston for treatment	122
By veterinarian	256		
By investigator	286	Deaths investigated	4

NURSING SERVICE.

		Jan.
Homes Visited		13,634
Child Hygiene:		
New cases visited	2,190	
Old cases revisited	7,615	
Total child hygiene visits†		9,805
Communicable Diseases:		
New cases visited	1,609	
Old cases revisited	4,745	
Total communicable disease visits‡		6,354
Miscellaneous Visits:		
Infant death investigations		59
Maternal death investigations		11
Patients accompanied to hospital		1
Visits to day nurseries		63
Other special visits		82
Visits to parochial school children		886
Visits to parochial schools		92
Posture visits		77
Nutrition visits		21
Total number of all visits		17,451
Number hours spent in stations by nurses		1,608
Number hours spent in conferences by nurses§		1,775

HEALTH UNITS.

Miscellaneous Unit Activities:	
Complaint of insanitary conditions	23
Number of persons given health and other information	488
City visitors	132
Out of city visitors	20
Routine medical examination of adults	5
Dental Service:	
Number of children's teeth cleaned	428
Number of children treated	1,858
Prophylaxis	4,145
Eye Service:	
New cases	32
Number of refractions	97
Number of glasses prescribed	32
Number of examinations for diagnosis	44

* Included in report of Nursing Service.

† Includes 97 wrong addresses; 1,022 not seen; total, 1,099 absent visits.

‡ Includes 249 ophthalmia cases; 44 wrong addresses; 108 not seen; total, 152 absent visits.

§ This includes Child Health Conferences, vaccination and diphtheria immunizations at stations.

MEDICAL DIVISION OF HEALTH DEPARTMENT:*	
Work performed by medical inspector:	
Visits made by medical inspector in the district	322
Vaccinations performed by medical inspector	18
Number of vaccination certificates issued	17
Antitoxin, antityphoid and toxin-antitoxin administered	35
Number of children examined for day nurseries	322
Nurses' visits:†	
Communicable disease visits by nurses in district	1,115
CHILD HYGIENE DIVISION OF HEALTH DEPARTMENT:‡	
Number of child health conferences	28
Total attendance at child health conferences	1,166
New babies at conferences	117
Homes visited by nurses	3,074
Home visits to babies and pre-school children	2,325
Infant deaths investigation visits	9
Special visits	3
Number of posture classes	17
Attendance at posture classes	813
BOSTON SANATORIUM:	
Calls made by nurses in the district	1,654
BOSTON LYING-IN HOSPITAL:	
Pre-natal Clinic:	
Number of clinics	9
Attendance	120
COMMUNITY HEALTH ASSOCIATION:	
General Division:	
Home visits by nurses	5,622
BOSTON DISPENSARY:	
Calls by district physician	54
STATE DEPARTMENT OF MENTAL DISEASES:	
Number of clinics	8
Attendance at clinics	61
Visits of workers	58
New cases	5
American Red Cross, number of classes	3
Attendance at classes	13
INFANTILE CLINIC OF CHILDREN'S HOSPITAL:	
Number of clinics	2
Attendance	11

MONTHLY REPORT OF VENEREAL DISEASE ACTIVITIES, JANUARY, 1927.

SYPHILIS

Current cases under investigation January 1, 1927	5
New cases reported during month of January	9
	14

* Included in "Medical Division" report.

† Included in "Medical Division" and "Nursing Service" report.

‡ Included in "Child Hygiene Division Report" and "Nursing Service."

Disposition of Cases.

Placed under treatment	7
Unable to locate	2
Under investigation January 31	5
Total	14
New cases reported by number	71

GONORRHEA.

Current cases under investigation January 1, 1927	16
New cases reported during month of January	39
	55

Disposition of Cases.

Placed under treatment	15
Unable to locate	14
False address	10
Treatment not needed	1
Under investigation January 31	15
	55
New cases reported by number	215

SUMMARY.

Current cases under investigation January 1, 1927	21
New cases reported during month of January	48
	69

Disposition of Cases.

Placed under treatment	22
Unable to locate	16
False address	10
Treatment not needed	1
Under investigation	20
	69
Visits by venereal investigator	286

VENEREAL COMPLAINTS AND SOURCES OF INFECTION.

Under investigation January 3, 1927	3
New cases reported during January	5
	8
No evidence of disease	3
Unable to locate	2
Under investigation	3
	8

CHILD HYGIENE DIVISION.

REPORT OF TOXIN-ANTITOXIN ADMINISTRATION AND VACCINATIONS AT CHILD HEALTH CONFERENCES DURING JANUARY, 1927.

Station.	Toxin-Antitoxin.			Vaccinations.
	First.	Second.	Third.	
Old Town Hall, Brighton	4	4	2	0
31 Lincoln street, Allston	3	6	6	2
Charlestown Municipal Building	5	5	2	10
Codman Square, Dorchester	9	9	9	3
Columbia Road Municipal Building	3	1	1	0
7 Gordon place, Dorchester	1	1	1	1
East Boston Health Unit	13	11	10	11
Hyde Park Municipal Building	17	6	3	0
Curtis Hall, Jamaica Plain	2	2	4	1
41 North Margin street	42	34	33	1
Roslindale Municipal Building	14	8	9	0
Beth Israel Hospital	8	6	7	0
Children's Hospital	0	0	0	2
1049 Columbus avenue	7	9	5	6
Vine Street Municipal Building	3	1	2	3
140 Dorchester street	7	12	17	4
70 Emerald street	2	2	0	0
640 Harrison avenue	5	6	2	2
46 Lovering street	7	6	4	0
Shawmut Avenue Municipal Building	3	1	0	1
122 Tyler street	3	5	15	1
17 Blossom street	9	7	13	2
Totals	167	142	145	50
Totals, all stations	.....	.....	454	.....

DOCTOR McCULLUM FAVORS PASTEURIZATION.

Dr. E. V. McCullum, in charge of the Department of Chemical Hygiene of the Johns Hopkins University, Baltimore, Md., has stated his position regarding pasteurization of milk in the following letter to the editor of the "Food and Drug Review":

"In a recent number of 'Certified Milk' an article appears in which the statement is attributed to me that following the adoption of an ordinance requiring the pasteurization of milk in the city of Baltimore, rickets among children increased 100 per cent.

"This statement is entirely fallacious, since I never said anything of the kind. Nothing is better established than the fact that there is no relation between the use of pasteurized milk and the incidence of rickets in children. I am much annoyed now by inquiries which are coming to me about this statement, and I shall appreciate it if you will give this letter publicity so as to counteract the influence of this statement, which evidently had its origin in the mind of someone who is willing through unscrupulous methods to create a sentiment in favor of raw milk. I may add that I am unqualifiedly in favor of pasteurization and would recommend it even for certified milk."

MONTHLY REPORT OF CHILD HEALTH CONFERENCES JANUARY, 1927.

Station.	Number of Babies.	Number of Pre-school.	Total Attendance.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	91	16	107	6	10	16	4	27
31 Lincoln street, Allston	55	21	76	7	6	13	4	19
Charlestown Municipal Building	274	31	305	41	8	49	9	34
Codman square, Dorchester	348	34	382	45	10	55	9	45
Columbia Road Municipal Building	454	7	461	54	6	60	9	51
7 Gordon place, Dorchester	183	5	188	19	5	24	4	47
East Boston Health Unit	347	75	422	60	14	74	9	47
Hyde Park Municipal Building	187	24	211	15	8	23	5	42
Curtis Hall, Jamaica Plain	122	13	135	15	1	16	4	34
41 North Margin street	190	133	323	32	25	57	8	40
Roslindale Municipal Building	228	25	253	23	7	30	5	51
Beth Israel Hospital	106	20	126	18	3	21	4	31
Children's Hospital	116	8	124	21	1	22	4	31
1049 Columbus avenue	207	30	237	29	9	38	8	30
Vine Street Municipal Building	270	13	283	52	4	56	5	57
140 Dorchester street	215	23	238	43	11	54	8	30
70 Emerald street	72	11	83	10	1	11	4	21
46 Lovering street	66	25	91	6	3	9	4	23
Shawmut Avenue Municipal Building,	115	16	131	10	2	12	4	33
640 Harrison avenue	38	20	58	4	0	4	4	14
122 Tyler street	68	23	91	9	3	12	4	23
17 Blossom street	355	66	421	25	4	29	9	47
Totals	4,107	639	4,746	544	141	685	128	37.0

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

	Jan.
Stores inspected	4,888
Sanitary defects remedied	104
Complaints at office	38
Referred to Sanitary Division	18
Notices to abate nuisances	63
Court cases	6
Convictions	5
Fines	$285
Discharged	1
On file	2
Applications for pedlers' licenses approved	85
Vehicles inspected and approved	438
Laboratory Examinations:	
Bacteriological	7
Chemical	2

CONDEMNATIONS.

Meat:		Vegetables:	
Beef	272 pounds	Potatoes	3,560 pounds
Corned beef	75 pounds	Sauerkraut	14 cans
Deer	1	Spinach	830 bushels
Liver	6 pounds	Miscellaneous:	
Pig's head	16 pounds	Cheese	3 pounds
Tongue	11½ pounds	Condensed milk	4 gallons
Turkey	11½ pounds	Cereal	17 pounds
Fish:		Chicory	20 heads
Miscellaneous	6 pounds	Coffee	2 pounds
Salt mackerel	1,520 pounds	Flour	764 pounds
Scallops	2 barrels	Macaroni	40 pounds
Vegetables:		Matzoth	24 pounds
Lettuce	17,616 heads	Olives	3 pounds
Onions	14,700 pounds	Pickles	350 pounds

LIVE STOCK INSPECTION (Brighton Abattoir).

Cattle inspected	96	Parts condemned (lbs.)	2,524
Calves inspected	1,499	Animals condemned	2
Swine inspected	4,351		

DAIRY DIVISION.

Total inspection	1,962	Total cattle inspected	7,235
Dairies inspected	431	Inspections of milk plants and licensed dealers	237
Scoring above 50 *	250	Bacteriological examinations	525
Scoring below	181	Country creamery inspections	12
With milk rooms	274	Sediment tests	725
Without milk rooms	157		
Inactive	26		

* Passable mark.

BUREAU OF MILK INSPECTION.

SAMPLES EXAMINED.

CHEMICAL:	
Milk from wagons	257
Milk from stores	916
Milk brought by citizens	17
Vinegar	31
Condensed milk	1
Ice cream	1
Water	2
Salad oil	4
Whiskey	6
BACTERIOLOGICAL:	
Milk	614
Ice cream	33

SANITARY INSPECTION.

Original inspections	1,551	Complaints investigated	415
New reports	2,132	Court cases authorized	3
Reinspections	5,807	Fines	$20
Legal notices served	136		

BACTERIOLOGICAL LABORATORY.

Diphtheria	1,295
Tuberculosis	233
Typhoid	61
Gonorrhea	804
Gonorrheal ophthalmia	74
Syphilis	1,194
Other examinations *	77
Bacteriological examinations of milk	614
Bacteriological examinations of ice cream	33
Swimming pools examined	60
Drinking water examined	3

* Malaria, 2; feces for typhoid, 24; urine for typhoid, 22; genito-urinary tuberculosis, 18; smear for organisms, 2, cocoa for poison, 1; smear for Vincent's angina, 3; coffee rolls for foreign substances, 1; dog's head for rabies, 1; blood culture, 1; dark field examinations, 2.

WHY IS A HANDSHAKE?

The *Canton News* of November 29 carried an editorial on "Handshake Germs" which appeals to us very much for its uncommon sense view of this questionable habit. The question has often occurred to us: Why is a handshake? Isn't it only a relic of the past with which we might profitably dispense. Much has been written about the custom, its origin and its meanings; yet nothing to justify it from a sanitary standpoint.

That it can convey infection can be proved by laboratory tests. The warm, moist surface of the hand forms a very favorable resting place for bacteria while waiting for further transfers to our friends. Germs are no respecters of persons or relationship. The most devoted of parents are physically just as capable of transferring

infection to their children as any one else. The honest, hearty handshake may and frequently does transfer just as many pathogenic bacteria as though a deadly enemy were concealing his mortal designs in such a greeting.

It is a strange thing, but nearly universal, that people cough and sneeze into or upon their right hands — the ones with which they shake hands. Germs cling very readily to the skin of the hands, and it requires much mechanical and chemical scrubbing and disinfection to remove them; yet, sociable little things that they are, they are ever ready to transfer their affections from one hand to another, or from hand to lip or food. Under ordinary conditions the human hand is a culture bed of germs and liable at any time to have its millions of germs augmented, or transferred, as the occasion presents. If you want to realize the possibilities of the transfer of diseases by the hand just watch any one for a day and see where he puts his hands, what he allows to touch and soil them and how democratic he is in passing his germs along to his friends and family.

That the custom of handshaking will ever go out of use may be doubted, but that it is a means of conveying disease is susceptible of scientific demonstration. Our only hope is that people, realizing the danger, will take every precaution against putting their hands where they may either acquire or transmit infection. The Chinese have a very commendable custom of shaking their own hands when meeting friends, a custom we might well adopt. We make a lot of fun of China, but often may profit by her ancient wisdom if we but would. At least, your own germs will stay at home if you shake your own hand.— *Canton Health News.*

DIGESTIVE DISORDERS.

A well-known medical man says "that defects and derangements of digestion are among the most common of human ailments. They not only complicate almost every variety of disease, but they constitute by themselves a serious torment to a large number of otherwise healthy people." In fact many are plagued half their lives with dyspeptic troubles. There is a wider freedom of choice as to time and material in supplying food to the body than air, and this constitutes a main reason why the alimentary system is more unfairly treated in many ways than the respiratory. The digestive disorders or disease of the alimentary system are in the main due to pappy foods, but more so through ignorance and neglect. Our food customs have a great deal to do with the mode of living and the consequent ailments. Sir George Newman states that excessive consumption of tea and alcohol furnishes two of the principal causes of dyspepsia, and particularly among women do we find so much nervous disorders. Some of the habits which have a large share in the creation of these disorders are: (*a*) irregularity of meals and the consumption of food in between them; (*b*) unvariated monotony of the regular meals; (*c*) failure to masticate, owing to defective teeth or other cause; (*d*) habit of drinking with meals and washing down food; (*e*) habit of bolting food; (*f*) over-eating; (*g*) swallowing air at time of eating; (*h*) abuse of alcoholic beverages. —*Leicester, Eng., Health Courier.*

VITAL STATISTICS, JANUARY, 1927.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING JANUARY, 1927, WITH COMPARATIVE FIGURES FOR JANUARY, 1926.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
All Causes:						
Total deaths	1,032	1,071	—39	15.62	16.33	—.71
Nonresidents deducted	850	915	—65	12.86	13.95	—1.09
By Age:						
Under one year	107	103	+4	1.62	1.57	+.05
One year to four years, inclusive	34	37	—3	.51	.56	—.05
Sixty years and over	448	484	—36	6.78	7.38	—.60
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	53	71	—18	.80	1.08	—.28
Arteriosclerosis	29	45	—16	.44	.69	—.25
Heart disease	238	240	—2	3.60	3.66	—.06
Nephritis, chronic	53	54	—1	.80	.82	—.02
Infant and Maternal Mortality:						
a. Total registered live births	1,223	1,185	+38	18.51	18.06	+.45
b. Registered stillbirths	34	33	+1	.51	.50	+.01
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	27.05	27.09	—.04
c. Deaths of mothers from causes incident to childbirth	13	10	+3	.20	.15	+.05
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	10.34	8.21	+2.13
Deaths of children in first year of life	107	103	+4	1.62	1.57	+.05
Deaths in first year per 1,000 live births,	.....	.....	.....	87.49	86.92	+.57
Violence:						
Accidents	48	35	+13	.73	.53	+.20
Homicides	2	6	—4	.03	.09	—.06
Suicides	2	9	—7	.03	.14	—.11
Miscellaneous:						
Alcoholism, acute or chronic	18	15	+3	.27	.23	+.04
Broncho-pneumonia	65	68	—3	.98	1.04	—.06
Cancer	95	102	—7	1.44	1.55	—.11
Cirrhosis of the liver	7	3	+4	.10	.04	+.06
Diabetes mellitus	24	26	—2	.36	.40	—.04
Diarrheal diseases, children under two years of age	12	7	+5	.18	.11	+.07

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	4	1	+3	.06	.015	+.045
Deaths.	—	—	—	—	—	—
Cerebrospinal meningitis.....Cases..	1	8	—7	.015	.12	—.105
Deaths.	1	2	—1	.015	.03	—.015
Diphtheria.....Cases..	133	109	+24	2.01	1.66	+.35
Deaths.	3	4	—1	.04	.06	—.02
Influenza.....Cases..	21	16	+5	.32	.24	—.08
Deaths.	2	6	—4	.03	.09	—.06
Measles.....Cases..	135	711	—576	2.04	10.84	—8.80
Deaths.	1	12	—11	.015	.18	—.165
Pneumonia (lobar).....Cases..	190	230	—31	3.01	3.51	—.50
Deaths.	83	73	+10	1.25	1.11	+.14
Scarlet fever.....Cases..	598	366	+232	9.05	5.58	+3.47
Deaths.	3	4	—1	.04	.06	—.02
Tuberculosis (pulmonary).....Cases..	123	164	—41	1.87	2.50	—.63
Deaths.	44	67	—23	.66	1.02	—.36
Tuberculosis (other forms).....Cases..	24	22	+2	.36	.33	+.03
Deaths.	8	6	+2	.12	.09	+.03
Typhoid fever.....Cases..	8	7	+1	.12	.11	+.01
Deaths.	1	—	+1	.015	—	+.015
Whooping cough.....Cases..	65	443	—378	.98	6.75	—5.77
Deaths.	1	10	—9	.015	.15	—.135

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1927 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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MUST CHILDREN HAVE CONTAGIOUS DISEASES?

"Must children have contagious diseases?" Or, perhaps as a mother puts the question, "Why, I always keep Mary clean, and she has plenty of fresh air, sunshine and good food, now when she gets big enough to go to school and mingle with other children must I expect that she is likely to come home with diphtheria, scarlet fever, measles, and other contagious diseases?"

Like many questions the question "Must children have Contagious diseases" cannot truthfully be answered by yes or no.

A child need not have smallpox. It can be very easily and certainly prevented by a very simple procedure which a parent can have done for nothing almost anywhere in this country, yet thousands of children in this country are having smallpox every year, more than in any civilized country in the world. Your child need not have typhoid fever. For the first time in history typhoid fever was not a military problem in the World War. Typhoid fever was prevented by giving recruits so-called vaccination against typhoid fever. In a way the use of the word "vaccination" in this connection is a misnomer, because protection, or immunization, as it should be called, against typhoid fever is secured by the application of a different principle from that involved in vaccination against smallpox, which is really a vaccination.

The procedure for securing immunization against typhoid fever is not quite as simple as vaccination against smallpox. It needs also to be repeated oftener to secure continued protection, but it is neither a difficult nor expensive procedure. Any physician can give it. It consists in injecting into the arm a certain number of typhoid fever germs which have not only been killed by heat, but further sterilized by being mixed with a strong disinfectant. It is customary to give three injections. The dead germs stimulate the body to build up its own defence against any live germ which may be subsequently taken into the body.

Any mother that so desires may easily assure herself that her daughter Mary is not going to come home with diphtheria.

By a procedure equally simple as that of protecting against typhoid fever the mother may immunize her daughter against diphtheria with such certainty that the mother need feel no alarm if she learns that the little girl at whose house Mary had spent the previous afternoon has been found to have a serious case of diphtheria. The mother may even find out if Mary really needs to be immunized against diphtheria. Most grown-up people and many children living in crowded cities somehow acquire a natural immunity against diphtheria. The Schick test will tell whether a person possesses this natural immunity. In dealing with young children, however, it is better to give the immunizing treatment and be sure of protection because experience has shown that young school children who are shown by the Schick test to possess a natural immunity may suddenly become susceptible to the disease.

If the mother wants to take the trouble she can also make sure that her little daughter Mary will not come home with scarlet fever. The mother, however, will be able to find some rather more plausible excuses for neglecting to protect Mary against scarlet fever, than in neglecting protection against the other diseases above mentioned.

The principle of protecting against scarlet fever is very much the same as in immunizing against diphtheria. It is not as yet, however, as easy to find physicians who are in the habit of giving the immunizing treatment against scarlet fever as against diphtheria. The treatment may make Mary feel sick for a day or two. Moreover, the protection instead of being practically permanent as with respect to diphtheria, appears to be comparatively brief. It certainly cannot be trusted to give protection for more than a year. Then natural immunity to scarlet fever as to diphtheria is quite common among children in a crowded city so that Mary may not really need to be given immunizing treatment against scarlet fever at all. It is even possible to protect Mary against measles, but it involves a procedure which is hardly practicable at present. The

blood of selected human beings who have had measles must be used. The protection given is brief and to assure continued protection one must keep on repeating the procedure indefinitely. It is, however, entirely practicable to make an attack of measles a very insignificant affair if the blood of a person who has had measles can be given to a child who is going to come down with an attack of measles provided it be given soon after the child has been exposed to infection. As yet, we cannot offer Mary any protection which will serve to prevent her from taking whooping cough. This is a disease whose seriousness, especially to young children, parents do not begin to appreciate. Unfortunately, also, there appears to be no natural immunity to either whooping cough or to measles as to diphtheria and scarlet fever.

The same may be said of mumps and chicken pox, which Mary may show up with any day.

Somebody might naturally remark right here. "It is then practically up to parents themselves to protect their children against contagious diseases." "What are Boards of Health for, anyway?"

It is up to the parents of children even to a greater extent than above indicated to protect their children against contagious diseases. For instance, when Mary blossoms out with the measles, her mother makes a great hullabaloo and sends for a doctor. Yet, Mary has been home from school for two days suffering with what Mary's mother thought to be a cold. Yet, in spite of plain symptoms that Mary was not well, her mother made no objection to letting Mary handle and care for her little year-old brother. Even if Mary had only a cold, this procedure meant that the little fellow would have a cold also with greater danger from a complicating pneumonia than the older Mary's case. As a matter of fact, while Mary was handling her little brother, she had measles in its most contagious stage. Measles is most contagious two or three, or perhaps four days before the rash appears. The danger to others disappears very rapidly after the rash appears. Scarlet fever is very contagious for two days before the rash appears, during which time the child is supposed to have a digestive upset. But unlike measles, scarlet fever may continue to be very contagious after the rash disappears. This fact, together with the mildness of the prevailing type of scarlet fever in Boston, accounts for the sudden flare-ups in scarlet fever which occur from time to time in one part or another of the City of Boston. Johnny or Mary has what the mother thinks is a digestive upset. There is a little rash, to be sure, but the mother regards this as a part of the digestive disturbance, or to the dose of salts which she gave the child. The rash quickly disappears and in two or three days Johnny or Mary feel fit to return

to school. Now, in many instances, nobody could tell when Johnny or Mary reappeared at school that he or she had had an attack of scarlet fever, and was capable of spreading the disease, nor could anybody tell until about eight or ten days later when it can be seen that the child's skin has begun to peel, or desquamate, as the dctors call it. In the meantime, Johnny or Mary give scarlet fever to all their playmates who are not so fortunate as to possess a natural immunity to scarlet fever. Some of them have very severe cases.

It is regarded as the business of Boards of Health not only to try to teach people the facts just mentioned but induce them to act on such information and even to some extent to furnish the means of enabling them to do so.

Boards of Health stick to their task, but progress in educating the public to apply well known information in the interest of their health is painfully slow.

To take one concrete example. Like measles and scarlet fever, all other contagious diseases, including influenza, common colds, mumps, pneumonia, are contagious before a diagnosis of the disease can positively be made, although in most such diseases there may be previous signs that the person is not well; whooping cough is most contagious a week before the whoop is heard and rapidly ceases to be contagious thereafter. A person may also have whooping cough and not whoop. A comparatively simple laboratory procedure, however, in this disease makes early diagnosis easy.

It should be evident, therefore, that any great success in preventing the spread of any of these contagious diseases, including colds, influenza and pneumonia, must depend upon the adoption of routine protection measures in the home or elsewhere before the presence of any actual cases of the disease are recognizable.

Experience has shown that probably the most important means of spreading common contagious diseases is by eating and drinking utensils. A person who uses a glass or a spoon leaves on it the germs of some contagious disease. The glass or spoon goes into the dishpan. The germs are spread around in dishwater not hot enough to harm them and in the dishwiping process the germs may be distributed over other eating and drinking utensils and served up to the next users of the same. Some of the germs are tough enough to live on a dry, apparently clean glass two days or longer.

Experience has also shown that one of the most successful ways of preventing the spread of colds and other common contagious diseases among collections of human beings is by sterilizing mess gear, by subjecting eating and drinking utensils in the washing process to water hot enough to kill any disease germs which may be

on them. The Navy has become very insistent in this matter. As the results of our insistence on the observance of our regulations in the same matter the importance of sterilizing eating and drinking utensils has become pretty well appreciated in the larger public eating establishments of Boston.

As the result of our teaching that contaminated hands is another way of spreading contagious diseases, it is probably a more common practice today to wash one's hands before eating than it formerly was, but it is safe to say that all our teaching has not served to raise the temperature of the dishwater in the average family dishpan high enough to hurt disease germs.

Boards of Health do more than preach in the way of protecting the public against contagious diseases. The Boston Health Department, for example, gives personal and laboratory help in making a correct diagnosis in cases of suspected contagious diseases. Where public opinion will sustain, as in the event of a smallpox outbreak, we use our legal powers to vaccinate or quarantine any person who might be exposed to the disease.

The law requires both physicians and "householders" to report to us all known cases of contagious diseases. It is true that this perhaps more often than otherwise means that we do not hear of the case until after the patient has done all the damage to others that he is likely to do. But we find out those whom he has exposed to infection and are able to so control them as to prevent them also from spreading disease. Without discussing the evidence, I may say that in addition to other beneficial effects, our routine procedure in these cases serves to decrease mortality by preventing the development of violent epidemics and by raising the age at which children contract common contagious diseases.

But a Board of Health really accomplishes its most important results in the promotion of public health through its protection of the public's food and drink. For, after all, the health of the human animal as of all other animals is essentially a question of food and drink,— the assurance of a proper amount and variety, the preservation of quality and the prevention of contamination by disease-producing organisms.

Reference has been made to vaccination against typhoid fever and scarlet fever, but as a matter of fact typhoid fever has been practically eradicated from Boston by the prevention of the use of water from possibly contaminated sources, and by insistence on the pasteurization of milk. The pasteurization of milk has likewise, for many years, prevented those alarming epidemic outbreaks of scarlet fever and of dangerous sore throats which so frequently occurred in the past.

A NEW METHOD OF MOSQUITO CONTROL.

The demonstrated success of Paris green in antimalarial work has rendered obsolete the use of oil to check the breeding of malarial mosquitoes.

Over six years ago, experiments suggested the practicability of using some kind of a poisonous dust on the surface of breeding places of the anopheles mosquito. Further experiments led to the adoption of *copper aceto arsenite* (Paris green or Schweinfurt green) as probably the cheapest and most effective substance for this purpose.

As at present being most generally used, the Paris green is mixed with 100 volumes of some inert dust, for example, fine road dust. The mixture is blown in the air and allowed to fall on the surface of the water. Airplanes have been used for the purpose of spreading the dust, but various kinds of agricultural blowers made for distributing insecticide powders are commonly used. The surface tension of the water keeps the fine powder from sinking and it is eaten by the surface feeding anopheles larvæ. These larvæ in feeding will swallow any floating material not too large.

When thus mixed with dirt about a teaspoonful of Paris green is found to be sufficient to kill practically all the anopheles larvæ within a water surface area of forty square yards. Furthermore, when thus used, it has been found effective without removing thick surface growing algæ or obstructing vegetation, as is necessary when oil is used for the same purpose. It has also been found equally effective on running water as in stagnant pools.

In the small proportion in which the Paris green is used, the danger of poisoning to either human beings or animals appears to be practically *nil*. The freedom of cattle and ducks from symptoms of poisoning, even when using water which had been repeatedly sprayed with the dust, has led to its use in wells from which human beings obtained their supply of drinking water, but thus far in such instances no signs of arsenical poisoning have been detected. Clinical tests of water in shallow stagnant pools which have been sprayed with the dust show no traces of arsenic after twenty-four hours. Just what happens to the arsenic is not clear, but it is presumed that it may be eliminated in some way in the aquatic flora.

Nor does the spraying of water with this Paris green mixture kill frogs or fish, or even the top-feeding minnows, which are often utilized in antimalarial work, as a natural enemy to mosquito larvæ.

Unfortunately, the Paris green dust does not kill the larvæ of the culex mosquitoes which constitute the chief mosquito nuisance in this vicinity. This is presumably due to a difference in the

feeding habits of the two kinds of mosquito larvæ, the culicine larvæ apparently feeding below the surface and not being disposed to swallow everything in sight. Presumably, also, for the same reason, other insect larvæ are not affected by the arsenic. It kills the anopheles mosquito only during the larval stage of development and has no effect on the eggs or the pupæ.

The use of Paris green in antimalarial work has been essentially an American development, but has been taken to Italy by Dr. L. W. Hackett, as the representative of the Rockefeller International Health Board, and it is here that its great advantage, its cheapness, has been especially manifest.

The great obstacle to the eradication of malaria has usually been that the cost was beyond the economic resources of the people who might otherwise benefit thereby. Doctor Hackett demonstrated that so far as the cost of material was concerned, the Paris green dusting method brought the suppression of malarial bearing mosquitoes within the economic resources of the far from prosperous malaria infested towns of Sardinia.

EXERCISE.

Johnny had grown up to be a boy sixteen years old and had finally done something which made it clear that he was not mentally right, that he was feeble-minded to a certain extent.

"When did you first notice anything peculiar about Johnny?" the mother was asked. "When he was about a year and a half old," was the mother's reply. "When Willie and Harry, his older brothers, were that age, I always had to watch them or they would crawl around and get into mischief and trouble, but Johnny was such a good baby. He always stayed just where I put him."

Now the fact that Johnny did not try out new stunts with his little arms and hands and legs and crawl around and experiment showed that there was something wrong with him. A healthy normal child, boy or girl, always wants to use his or her growing muscles as well as his or her growing brain. They want to use both. The same is true of every young growing animal. If a child or a pup does not want to play there is something wrong with them. If a growing young animal or a child is deprived of the opportunity to use and to exercise his muscles he will not develop into a healthy grown-up—you may be sure of that. If he is put at work which makes him use some muscles very hard and others very little he will not develop into a healthy normal grown-up either.

Now, exercise of muscles is not only necessary for the

development of a healthy normal grown-up body. It is necessary to keep the body in a healthy condition after it has grown and developed all that it is going to.

Any muscle which is not being used grows weak. Muscles are necessary to keep the ends of bones in the proper position where bones come together at joints. Bones are held together at the joints by what is known as ligaments or gristle. Ligaments look tough and strong but as a matter of fact they stretch and give way just as soon as any strain is put on them. Nature does not intend that any strain shall be put on ligaments. Nature has so constructed the body that ligaments are re-enforced and supported by muscles designed to take all strain off ligaments. If muscles are not used they become weak and slack and the strain falls on the ligaments. They stretch and the joints get out of place and the body becomes buckled, bent or twisted out of its proper position. The person may become round-shouldered, saddle-backed, or flat-footed or otherwise distorted and the lungs and heart cannot work properly.

Did you ever notice that when you see a person with his head and shoulders bent forward his belly sags down and out also? The front of the bowels and other internal organs are attached by ligaments to the back bone, but are supposed to be supported and held up in place by the abdominal muscles. If a person does not take exercise which makes him use his abdominal muscles they become weak and fail to give proper support to the bowel ligaments and they stretch and the bowels and internal organs sag down by their own weight and the person's belly measure slowly increases until it becomes larger than his chest measure. Nature may try to stop the sagging organs by piling in a cushion of fat behind the abdominal muscles, but after a while this makes matters worse because it increases the weight which is pressing down against the weak abdominal muscles. A person with a pot belly cannot be healthy and well because bowels and other internal organs which have sagged down out of place cannot work properly. The right kind of muscular exercise or work is therefore just as necessary to maintain the health of a grown person as it is to assure the proper development of a child.

Most growing boys and girls get exercise of a good sort in their out-of-door play or sports but some do not; besides for the past five months bad weather, snow and slush prevented out-of-doors play and sports very often when boys and girls had an opportunity to get out of doors. Some grown-ups may get enough of the right kind of exercise out of doors but most do not. Moreover, some growing boys and girls and many grown-ups have some faulty condition for the correction of which special exercises are necessary.

The need of some special public provision to serve all these purposes and to keep people strong and healthy has been recognized in civilized communities for over 2,000 years. That is why your own city has provided you with eleven of these splendidly equipped indoor gymnasiums. Yet just think how comparatively little benefit the people are getting out of them. You who are using them know how much benefit you are getting from them. You, both old and young, know how much healthier and happier you feel and how much more real work you can do if you put in your spare time exercising here instead of lying around doing nothing worth while. You who are parents know that if your boys are interested in gymnasium work they are less likely to get into things outside which are injurious to them or troublesome to you. The Health Department knows how much gymnasiums are doing for you and is trying to get more people to benefit from them.

CLEAN PREMISES.

The common alliteration that "Flies, fingers and filth spread disease" is apt, and a well-known truism to physicians and sanitarians.

Flies, rats, mosquitoes, and vermin breed in garbage, refuse and other discarded kitchen material. Without such sustenance they would disappear from the home.

The rat is one of the most dangerous pests man has to contend with. He is a great destroyer and a spreader of bubonic plague, the cause of fires, disease, pollution, and it means to the people of the United States an annual sum of $182,000,000 without including property and other damage. All of us help to maintain the rat by our laxity.

It is the mosquito that carries the dreaded yellow fever and malaria, and it breeds in stagnant liquids. It is vicious and was the cause of the great failure at Panama by DeLesseps to build the canal. Only were Goethals and Gorgas successful after they destroyed the breeding place of this pest.

The fly is the filth carrier, is known to transmit typhoid fever, tuberculosis, erysipelas, anthrax, diarrheal conditions and other baby infections and intestinal disturbances.

The safe, sanitary and economic way of disposing of these indirect means of causing and spreading disease, besides eliminating offensive odors, is to rid your premises of garbage immediately. The safest, sanitary and economic way is to burn your garbage, and fire is the great destroyer.

Many housewives dispose of their refuse by putting the garbage

into the stoves or furnaces, but oftentimes the odors are nauseating, and the combustion is not sufficient, leaving garbage undisposed of. If we are in a crowded neighborhood this method of slow combustion often gives rise to complaint, yet if we allow garbage and other refuse to remain in our hallways, in our yards, or on the fire escapes, collections at times are not regular enough to prevent a nuisance.

Let us then remember that garbage is a food and breeding place for rats, insects, vermin, etc., nourishes them, and they become regular visitors, if not tenants. Rid your premises of garbage as soon as possible by burning, burial or collection.

INTENSIVE LUNCHROOM SURVEY.

Since the first of the month the efforts of the Food Division have been centered on an intensive survey of sanitary conditions of premises and foodstuffs served in the restaurants of Boston. Interest was directed to lunchrooms located in the South and West Ends and Charlestown, and particular attention was given to the places or sections of the city where there is a floating population and the so-called hot-dog and hamburg stand is popular.

The striking feature of this examination was the all-round good quality of foodstuffs being purveyed, there being no record of a single condemnation for unwholesomeness. In one case some hamburger steak was found so heavily filled out with stale bread crumbs as to be considered an adulteration. The advantage to the proprietor guilty of this practice is shown in the fact that stale bread is worth about four cents a pound, while good hamburger may run up as high as twelve or fifteen cents a pound.

While the food was good, and some credit for that fact is due to a careful inspection in the big market and at the terminals, this statement was not true as to the sanitary conditions of the establishments inspected, nor as to the way food was handled before and after cooking. One of the drawbacks of a dirty store, or a shiftless system of handling, is that food which is otherwise good becomes contaminated before it is served.

One hundred and four notices were served either directing store owners to immediately clean up conditions complained of, or, as in the case of structural repairs, a reasonable time was assigned for the work. Five proprietors were summoned to the office of the Food Division, where such action was deemed desirable, and were told that unless their establishments were cleaned drastic action would be taken. In one case, conditions indicated such disregard of requirements that a complaint was forwarded to the Licensing

Board, where after a hearing the license was suspended until the place was put in satisfactory shape.

Aside from a tendency to allow the floors to go unswept, or to accumulate articles not used in the business, the chief cause of complaint noted by the inspectors was in the lack of care of ice chests. For example, meats were stored either in newspapers or directly on the ice itself. Another important item was the tendency to allow the sink to get sloppy. Gas ranges, too, it was not uncommon to find in an unclean way. Whatever was noted out of the way was immediately the subject of a notice to abate

A detail of the survey follows:

Number of places inspected	350
Number of notices served	104
Hearings at office	5
Places closed	1
Medical examinations needed	0
DEFECTS NOTICED:	
Floors (unclean, defective)	40
Walls	48
Ceilings	20
Storage facilities	5
Apparatus (ranges, benches)	40
Stock not protected	7
Products not protected	16
Metal waste cans needed	23
Domestic uses	1
Dressing rooms insufficient	19
Toilets unsatisfactory	39
General cleaning needed	7
Unused articles around	22
Disorderly or dirty cellars	14
Sterilization insufficient	17
Kitchen utensils	7
Utensils (table, condiment)	9
Dirty sinks	18
Ice chests (dirty, defective)	47
Roaches present	4
Evidence of rats	4
Dish cloths insufficient	5
Domestic animals allowed	3
Dry sweeping noted	1

DINNER OF THE BOSTON HEALTH LEAGUE.

The annual dinner of the Boston Health League was held March 14 at the Hotel Kenmore with about one hundred in attendance.

Dean David L. Edsall of the Harvard Medical School, who has just completed a six months teaching course in China, was the

principal speaker, who related his experiences in China with a résumé of the physical condition of the country as well as some interesting sidelights on the medical and economic phases of life in that part of the world.

Others seated at the head table were president, John W. Bartol; Rev. George P. O'Conor, vice-president; Dr. Richard Wadsworth, treasurer; Horace Morison, secretary; Dr. Charles F. Wilinsky, executive secretary; Hon. John J. Heffernan, president of the Boston City Council; Dr. George H. Bigelow, state commissioner of health; Dr. Francis X. Mahoney, Boston Health Commissioner; James S. Stone, president of the Massachusetts Medical Society; Dr. Stephen Rushmore, dean, Tufts Medical School; Dr. Alexander S. Begg, dean, Boston University School of Medicine; Prof. Milton J. Rosenau, professor of preventive medicine, Harvard School of Public Health; George E. Phelan, manager, George Robert White Fund; and Dr. Richard M. Smith, professor of child hygiene, Harvard Medical School.

MEETING OF MASSACHUSETTS ASSOCIATION OF BOARDS OF HEALTH.

The executive meeting of the Massachusetts Association of Boards of Health was held at the St. Botolph Club, on March 15, and it was agreed that the program for the dinner of the association would consist of papers and discussion of progress that has been made by the Whooping Cough Commission of Boston on the diagnosis and control of this disease, with laboratory demonstrations. Doctors Lawson and Smith who have been working on this subject will be asked to handle it.

In many of the states in the country legislation has been enacted affecting the so-called health and tourists' camps that are patronized so greatly in the summer in the country towns and at the seashore. Doctor Bigelow has proposed legislation along these lines and the matter of local city and town control of this important matter will be discussed by the State Commissioner of Health Bigelow. This talk will be of great interest to those who are in communities where there are such camps, and it is hoped that there will be a large representation at this meeting. Everyone interested is invited to attend the meeting that will be held at the Hotel Statler at 12.30 p. m. on April 28.

Notices of the meeting are being mailed to members and boards of health and the reply card should be filled out and mailed to the Massachusetts Association of Boards of Health, Box 5271, Boston, as soon as possible.

SURVEY OF THE QUALITY OF BOSTON MARKET MILK.

The following is the result of a survey made of market milk sold in Boston by dealers and chain stores during February, 1927. In Massachusetts the statute law requires a minimum of 12 per cent solids and 3.35 per cent butter fat.

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Alden Brothers	12.68	3.94	25
Allen, Fred H.	12.53	3.90	80
Antetomasso, Peter	12.40	3.80	14
Barron, C. W.	13.96	4.80	10
Bergmann, J. H.	12.89	4.11	24
Bolio, William	13.40	4.45	58
Brandley, F. J. & P. J.	12.57	3.97	13
Casey, James	13.09	4.35	24
Cashin, James	12.57	3.88	40
Cedar Hill	13.51	4.80	33
Chapin, George	12.48	3.92	22
Childs Brothers	12.88	4.10	50
Clapp, Frank L.	12.38	3.65	20
Clark, Levi	12.30	3.85	21
Converse, M. M.	12.59	3.70	49
Corkery, J. J.	12.20	3.65	48
Cosgrove, Martin S.	13.00	4.12	20
Cummings, F. S.	12.11	3.65	18
Cunningham, Paul	13.18	4.35	10
Cusick, W. H.	12.86	3.97	185
Dean, Louis W.	13.08	4.25	11
Deerfoot Farm	12.67	4.03	23
Denehy, Timothy	12.74	3.95	42
Driscoll, William B., Company	12.54	3.88	16
Duggan Brothers	12.85	3.93	45
Edgerly, Frank S.	12.36	3.75	24
Elm Spring Farm Company	12.24	3.75	17
English, J., & Son	12.96	4.10	10
Ferguson, M. D.	12.96	3.93	420
Furbush, A. J.	13.79	4.60	42
Garfield, Mason	14.67	5.35	17
Garvin, C. E.	14.64	5.40	14
Giroux, J. E. & H. J.	12.40	3.80	25

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Griffin, Joseph L.	12.69	3.98	19
Gushee, C. W.	12.85	4.12	32
Hurlihy Brothers	12.41	3.81	36
Hickey, M. J.	12.41	3.80	15
Holden, John E.	12.60	3.93	40
Hood, H. P., & Son	12.26	3.78	20
Hutchinson, F. T.	12.25	3.70	16
Jones, William T., Company	12.65	4.00	29
Kendall Brothers	12.31	3.75	113
Kingston, Samuel	13.25	4.23	17
Knapp, George J.	13.08	4.03	233
Lang Brothers	12.42	3.70	16
Larson, Charles	12.18	3.50	27
Lincoln Farms	12.58	3.93	18
Lyndonville Creamery	1.96	4.10	35
Manning, Peter	12.20	3.65	76
Maple Farm Milk Company	12.31	3.67	284
McAdams, J. F.	12.41	3.85	12
McKernan, James	12.29	3.78	60
Millwood Farms	12.73	4.05	66
Munchback, George	12.60	3.95	66
Newton & Pope	12.94	4.20	16
Noble, William F., & Co	12.92	4.13	24
Robinson, A. J.	12.35	3.75	28
Schuster, Adam	12.86	3.98	22
Seven Oaks	12.86	4.05	14
Shick, Jacob	12.55	3.92	520
Somerset Farms	13.56	4.65	10
Sterling Farms Milk	12.86	4.05	18
Stone, H. L.	12.27	3.88	38
Stuart, W. E.	12.50	3.93	16
Swett, Warren	11.91	3.55	15
Turner Centre System	12.65	3.94	24
United Farmers' Co-operative Creamery Company	12.69	3.97	13
Vartanian, S.	12.26	3.80	20
Vartanian, K.	12.52	4.05	50
Walker-Gordon	12.98	4.45	8
Weiller, E., & Sons	12.76	4.10	29
Werner Company	12.38	3.82	46

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Westwood Farms	12.55	3.78	29
White Brothers	12.60	3.85	15
Whiting Milk Companies*	12.35	3.85	17
Whittemore, W. D.	13.09	4.15	16
Wiswall, George A.	12.72	4.05	28
Woodland, Charles L.	12.60	4.10	44

* Through clerical error the December, 1926, survey gave the number of thousands of bacteria per cubic centimeter for the Whiting Milk Companies as 86. The correct value was 26.

CHAIN STORE MILK.

Name of Dealer.	Supplied by.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
		Per Cent.	Per Cent.	
The Great Atlantic & Pacific Tea Company.	Hood & Sons Company	12.31	3.83	81
The Cloverdale Company	Turner Centre System, Inc.	12.65	3.88	46
John T. Connor Company	Bellows Falls Co-operative Creamery Company.	12.83	4.16	26
Economy Grocery Stores*	Whiting Milk Companies	12.23	3.75	27
The Ginter Company	Ginter Company	12.81	4.05	14
Morgan Brothers Company	Morgan Brothers	12.74	4.03	106
O'Keefe's, Inc.	Bellows Falls Co-operative Creamery Company.	12.84	4.16	27
Winer, M.	Hyman Winer	13.09	4.13	58

* Through clerical error the December, 1926, survey gave the number of thousands of bacteria per cubic centimeter for the Economy Grocery as 83. The correct value was 17.

SUMMARY OF THE WORK, FEBRUARY, 1927.

BUREAU OF ADMINISTRATION.

Prosecutions ordered	8	Personnel:	
Legal notices	169	Leave of absence	1
Slaughter house license assigned	1	Pension granted	1
Personnel:		Designations changed	2
Resignation	1	Conservation Bureau discontinued	1

LICENSES, PERMITS, ETC., ISSUED.

Bakery closed	1	Garbage transported	3
Burial permits	1,121	Manicure-massage	50
Day nurseries	2	Milk	152
Denatured alcohol	18	Pedlers	25
Dumps approved	12	Stable permit, final	1
Dump refused	1	Undertaker	1

MEDICAL DIVISION.

Visits:		Cases brought to Boston for treatment	130
By medical inspectors	1,790	Deaths investigated	15
By veterinarian	232		
By investigators	280		

NURSING SERVICE.

Homes Visited		14,046
Child Hygiene:		
New cases visited	1,429	
Old cases revisited	7,715	
Total child hygiene visits†*		9,144
Communicable Diseases:		
New cases visited	1,613	
Old cases revisited	5,752	
Total communicable disease visits‡		7,365
Miscellaneous Visits:		
Infant death investigations		44
Maternal death investigations		4
Patients accompanied to hospital		3
Visits to day nurseries		49
Visits to parochial school children		7
Visits to parochial schools		47
Posture visits		20
Nutrition visits		4
Total number of all visits		16,687
Number hours spent in stations by nurses		1,600
Number hours spent in conferences by nurses §		1,384

HEALTH UNITS.

Miscellaneous Unit Activities:	
Complaint of insanitary conditions	22
Number of persons given health and other information	444
City visitors	118
Out of city visitors	22
Routine medical examination of adults	6
Dental Service:	
Number of children's teeth cleaned	341
Number of children treated	1,640
Prophylaxis	3,528
Eye Service:	
New cases	15
Number of refractions	56
Number of glasses prescribed	21
Number of examinations for diagnosis	44

* Included in report of Nursing Service.

† Includes 137 wrong addresses; 966 not seen; total, 1,103 absent visits.

‡ Includes 18 ophthalmia cases; 35 wrong addresses; 84 not seen; total, 119 absent visits.

§ This includes Child Health Conferences, vaccination and diphtheria immunizations at stations.

MEDICAL DIVISION OF HEALTH DEPARTMENT:*	
Work performed by medical inspector:	
Visits made by medical inspector in the districts	297
Vaccinations performed by medical inspector	22
Number of vaccination certificates issued	9
Antitoxin, antityphoid and toxin-antitoxin administered	71
Number of children examined for day nurseries	276
Nurses' visits: †	
Communicable disease visits by nurses in district	1,134
CHILD HYGIENE DIVISION OF HEALTH DEPARTMENT:‡	
Number of child health conferences	23
Total attendance at child health conferences	5,658
New babies at conferences	671
Homes visited by nurses	3,065
Home visits to babies and pre-school children	2,321
Infant deaths investigation visits	10
Special visits	3
Number of posture classes	21
Attendance at posture classes	594
BOSTON SANATORIUM:	
Calls made by nurses in the district	1,761
BOSTON LYING-IN HOSPITAL:	
Pre-natal Clinic:	
Number of clinics	8
Attendance	117
COMMUNITY HEALTH ASSOCIATION:	
General Division:	
Home visits by nurses	5,528
BOSTON DISPENSARY:	
Calls by district physician	58
STATE DEPARTMENT OF MENTAL DISEASES:	
Number of clinics	4
Attendance at clinics	37
Visits of workers	25
New cases	1
American Red Cross, number of classes	8
INFANTILE CLINIC OF CHILDREN'S HOSPITAL:	
Number of clinics	2
Attendance	6

* Included in "Medical Division" report.
† Included in "Medical Division" and "Nursing Service" report.
‡ Included in "Child Hygiene Division Report" and "Nursing Service."

MONTHLY REPORT OF VENEREAL DISEASE ACTIVITIES, FEBRUARY, 1927.

Current cases under investigation February 1, 1927	5
New cases during February	14
Total	19

DISPOSITION OF CASES.

Placed under treatment	2
Unable to locate	7
False address given	5
Under investigation March 1, 1927	5
Total	19
New cases reported by number	77

GONORRHEA.

Current cases under investigation February 1, 1927	15
New cases during February	40
Total	55

DISPOSITION OF CASES.

Placed under treatment	9
Unable to locate	13
False address given	7
No evidence of disease	1
Under investigation	25
Total	55
New cases reported by number	165

SUMMARY.

Cases under investigation	20
New cases during February	54
Total	74

DISPOSITION OF CASES.

Placed under treatment	11
Unable to locate	20
False address given	12
No evidence of disease	1
Under investigation March 1, 1927	30
Total	74
Visits by investigator	280

VENEREAL COMPLAINTS, SOURCES OF INFECTION, AND VENEREAL DEATH INVESTIGATION.

Under investigation, February 1, 1927	3
New cases reported during February	4
Total	7

DISPOSITION OF CASES.

Under treatment	4
Unable to locate	2
Not a case	1
Total	7
Venereal deaths investigated	4

CHILD HYGIENE DIVISION.

REPORT OF TOXIN-ANTITOXIN ADMINISTRATION AND VACCINATIONS AT CHILD HEALTH CONFERENCES DURING FEBRUARY, 1927.

STATION.	TOXIN-ANTITOXIN.			Vaccinations.
	First.	Second.	Third.	
Old Town Hall, Brighton	5	4	4	2
31 Lincoln street, Allston	2	0	3	2
Charlestown Municipal Building	6	5	7	9
Codman Square, Dorchester	9	6	9	3
Columbia Road Municipal Building	2	4	0	2
7 Gordon place, Dorchester	5	3	1	3
East Boston Health Unit	1	1	2	9
Hyde Park Municipal Building	3	6	11	2
Curtis Hall, Jamaica Plain	7	5	3	1
41 North Margin street	29	32	39	1
Roslindale Municipal Building	0	1	3	2
Beth Israel Hospital	4	6	8	0
Children's Hospital	0	0	0	0
1049 Columbus avenue	7	6	5	14
Vine Street Municipal Building	2	1	1	8
140 Dorchester street	16	12	19	13
70 Emerald street	7	7	8	0
640 Harrison avenue	3	4	5	5
Shawmut Avenue Municipal Building	1	3	4	5
46 Lovering street	2	5	3	0
122 Tyler street	9	9	6	1
17 Blossom street	6	6	5	0
Totals	126	126	146	82
Totals, all stations				398

MONTHLY REPORT OF CHILD HEALTH CONFERENCES FEBRUARY, 1927.

Station.	Number of Babies.	Number of Pre-school.	Total Attendance.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	154	19	173	28	8	36	4	43
31 Lincoln street, Allston	48	14	62	4	2	6	4	16
Charlestown Municipal Building	266	41	307	30	6	36	8	77
Codman square, Dorchester	356	44	400	49	12	61	8	50
Columbia Road Municipal Building	446	5	451	49	7	56	8	56
7 Gordon place, Dorchester	147	1	148	20	1	21	3	49
East Boston Health Unit	361	60	421	58	9	67	8	53
Hyde Park Municipal Building	104	21	125	15	5	20	4	31
Curtis Hall, Jamaica Plain	184	29	213	27	3	30	4	53
41 North Margin street	244	189	433	44	19	63	7	62
Roslindale Municipal Building	127	19	146	8	8	16	4	37
Beth Israel Hospital	118	22	140	14	0	14	4	35
Children's Hospital	83	6	89	11	1	12	3	30
1049 Columbus avenue	259	35	294	47	13	60	7	42
Vine Street Municipal Building	198	8	206	27	1	28	4	52
140 Dorchester street	241	44	285	58	29	87	7	41
70 Emerald street	115	26	141	13	4	17	4	35
46 Lovering street	74	31	105	6	1	7	4	26
Shawmut Avenue Municipal Building,	96	11	107	2	1	3	3	36
640 Harrison avenue	68	7	75	13	1	14	4	19
122 Tyler street	76	23	99	10	1	11	3	33
17 Blossom street	323	61	384	36	12	48	8	48
Totals	4,088	716	4,804	569	144	713	113	42

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

Stores inspected	4,507
Sanitary defects remedied	86
Complaints at office	32
Referred to Sanitary Division	9
Notices to abate nuisances	84
Court cases	1
Convictions	1
Fines	$50
Applications for pedlers' licenses approved	27
Vehicles inspected and approved	364

Laboratory Examinations:	
Bateriological	5
Chemical	7

CONDEMNATIONS.

Meat:		Vegetables:	
Beef	543 pounds	Cabbage	200 pounds
Frankfurts	10 pounds	Turnips	76,950 pounds
Fowl	14 pounds	Oranges	260 boxes
Kidneys	4	Oranges	78 dozen
Kidneys	5½ pounds	Pears	95
Miscellaneous	150 pounds	Miscellaneous:	
Pluck	1	Butter	2 pounds
Poultry	62½ pounds	Beans	576 bags
Sausages	1,100 pounds	Liquid eggs	90 pounds
Sweetbread	1	Olives	10 pounds
Fish	60 pounds	Spaghetti	100 pounds

LIVE STOCK INSPECTION (Brighton Abattoir).

Cattle inspected	1,030	Parts condemned (lbs.)	5,283
Calves inspected	2,121	Animals condemned	12
Swine inspected	4,033		

DAIRY DIVISION.

Total inspection	1,788	Total cattle inspected	5,305
Dairies inspected	345	Inspections of milk plants and licensed dealers	287
Scoring above 50 *	198	Bacteriological examinations	381
Scoring below	147	Country creamery inspections	14
With milk rooms	212	Sediment tests	746
Without milk rooms	133		
Inactive	13		

* Passable mark.

BUREAU OF MILK INSPECTION.

SAMPLES EXAMINED.

CHEMICAL:	
Milk from wagons	212
Milk from stores	993
Milk bought by citizens	7
Vinegar	53
Salad oil	2
Ice cream	2
Cake	1
Laundry bleach	4
Liquor	14
Sausage	4
BACTERIOLOGICAL:	
Milk	550
Ice cream	63

SANITARY INSPECTION.

Original inspections	1,682	Legal notices served	158
New reports	2,434	Complaints investigated	437
Reinspections	6,216	Court cases authorized	4

BACTERIOLOGICAL LABORATORY.

Diphtheria	1,287
Tuberculosis	220
Typhoid	35
Gonorrhea	688
Gonorrheal ophthalmia	64
Syphilis	1,178
Other examinations *	1,109
Bacteriological examinations of milk	550
Bacteriological examinations of ice cream	63
Swimming pools examined	60
Drinking water examined	31

* Malaria, 3; feces for typhoid, 14; urine for typhoid, 14; tests for virulence, 1; genito-urinary tuberculosis, 15; smear for Vincent's angina, 2; vanilla for worms, 1; jam for foreign matter, 1; beef kidney for poison, 1; evaporated milk for organisms, 1; smears for streptococci, 49; orangeade for organisms, 1; paratyphoids, 2; dark field, 1; chicken for contamination, 1; beef for contamination, 1; cream for contamination, 1.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING FEBRUARY, 1927.

Classification.	Number.	Percentage.
After death	4	7.02
Seven days or less	7	12.28
Eight to fourteen days, inclusive	2	3.51
Fifteen to twenty-one days, inclusive	2	3.51
Twenty-two to thirty-one days, inclusive	6	10.53
Within First Month. (Total)	21	36.85
Within second month	4	7.02
Within third month	4	7.02
Within fourth month	3	5.26
Within fifth month	3	5.26
Within sixth month	—	—
Within seventh month	—	—
Within eighth month	2	3.51
Within ninth month	—	—
Within tenth month	1	1.75
Within eleventh month	—	—
Within twelfth month	1	1.75
Within First Year Preceding Death. (Total)	39	68.42
Within second year	7	12.28
Within third year	4	7.02
More than three years	7	12.28
Grand totals	57	100.00

VITAL STATISTICS, FEBRUARY, 1927.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING FEBRUARY, 1927, WITH COMPARATIVE FIGURES FOR FEBRUARY, 1926.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
All Causes:						
Total deaths	953	952	+1	14.42	14.51	—.09
Nonresidents deducted	796	786	+10	12.04	12.13	—.09
By Age:						
Under one year	121	116	+5	1.83	1.77	+.06
One year to four years, inclusive	42	55	—13	.63	.84	—.21
Sixty years and over	361	400	—39	5.46	6.10	—.64
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	56	50	+6	.85	.76	+.09
Arteriosclerosis	28	33	—5	.42	.50	—.08
Heart disease	184	204	—20	2.78	3.11	—.33
Nephritis, chronic	65	56	+9	.98	.85	+.13
Infant and Maternal Mortality:						
a. Total registered live births	1,141	1,378	—237	17.27	21.00	—3.73
b. Registered stillbirths	39	51	—12	.59	.78	—.19
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	33.05	35.69	—2.64
c. Deaths of mothers from causes incident to childbirth	10	7	+3	.15	.11	+.04
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	8.47	4.90	+3.57
Deaths of children in first year of life	121	116	+5	1.83	1.77	+.06
Deaths in first year per 1,000 live births,	.....	.....	.....	106.05	84.18	+21.87
Violence:						
Accidents	42	35	+7	.63	.53	+.10
Homicides	—	1	—1	—	.015	—.015
Suicides	8	9	—1	.12	.14	—.02
Miscellaneous:						
Alcoholism, acute or chronic	10	12	—2	.15	.18	—.03
Broncho-pneumonia	66	62	+4	1.00	.94	+.06
Cancer	95	93	+2	1.44	1.42	+.02
Cirrhosis of the liver	1	4	—3	.015	.06	—.045
Diabetes mellitus	18	14	+4	.27	.21	+.06
Diarrheal diseases, children under two years of age	4	8	—4	.06	.12	—.06

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	—	—	—	—	—	—
Deaths.	—	—	—	—	—	—
Cerebrospinal meningitis.....Cases..	2	2	—	.03	.03	—
Deaths.	1	2	—1	.015	.03	—.015
Diphtheria.....Cases..	153	68	+85	2.31	1.04	+1.27
Deaths.	7	6	+1	.10	.09	+.01
Influenza.....Cases..	24	10	+14	.36	.15	+.21
Deaths.	4	7	—3	.06	.11	—.05
Measles.....Cases..	179	656	—477	2.71	10.00	—7.29
Deaths.	1	8	—7	.015	.12	—.10
Pneumonia (lobar).....Cases..	136	154	—18	2.06	2.35	—.29
Deaths.	54	61	—7	.82	.93	—.11
Scarlet fever.....Cases..	566	359	+207	8.56	5.47	+3.09
Deaths.	12	2	+10	.18	.03	+.15
Tuberculosis (pulmonary).....Cases..	128	156	—28	1.94	2.38	—.44
Deaths.	57	49	+8	.86	.75	+.11
Tuberculosis (other forms).....Cases..	29	20	+9	.44	.30	+.14
Deaths.	4	4	—	.06	.06	—
Typhoid fever.....Cases..	5	4	+1	.07	.06	+.01
Deaths.	—	—	—	—	—	—
Whooping cough.....Cases..	93	629	—539	.12	9.59	—9.47
Deaths.	3	14	—11	.04	.21	—.17

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1927 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

B. P. L. MAY 14 1927

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SENSITIVITY.

The inhalation of air containing a relatively small amount of the pollen of ragweed or goldenrod will produce in some persons so called "hay fever" and often with the accompaniment of an attack of asthma. The same effects may be produced in other persons, or perhaps in the same persons, by breathing the dust from the skin of a horse or a dog or a cat, or even by sleeping on a feather pillow. A similar abnormal irritability of a person's tissues, or hypersensitiveness to certain cereals is also quite common. An attack of asthma may be produced by exposure to an atmosphere containing wheat flour dust, or perhaps it may be rye flour or oatmeal, or all three.

The same sort of sensitiveness may also manifest itself in other ways. In many persons the eating of strawberries will produce a rash, probably with some symptoms of digestive derangement. In others, or perhaps in the same persons, oysters, lobsters, crabmeat or salmon, one or all, will produce a severe gastro-intestinal disturbance. In such cases, so often pronounced ptomaine poisoning, the fish is perfectly good. The sufferer has simply exceeded his tolerance of a food protein to which he is "sensitized," for whatever the theory

may be, such persons do practically possess a certain, even though small, degree of tolerance to substances to which they may be hypersensitive.

Instead of fish, it may be lamb, or beef, or veal or eggs or cow's milk which may produce symptoms of poisoning in certain unfortunate persons. The reaction may be abrupt and violent, or when such offending foods are eaten habitually more or less intermittent but persistent symptoms of irritation of the digestive or respiratory tract, or skin affections may result.

A substance to which a person is hypersensitive may be expected to show its effects first on the part of the body with which the substance comes into intimate contact as, for example, the digestive tract, but a person in whom the breathing of wheat flour dust will produce an attack of asthma may expect also to bring on an attack of asthma by eating wheat bread. A skin eruption may appear as the result of direct contact with a certain kind of fur. A persistent and troublesome skin affection may also be due to something which is habitually eaten. Perhaps it may disappear with the cutting out of wheat bread or the morning oatmeal from the daily diet.

Similar manifestations of hypersensitiveness may be produced by substances other than the class of proteins referred to above. Drug idiosyncrasies have long been recognized. A few grains of quinine sometimes will produce alarming symptoms of poisoning. The result of the administration of copaiba has more than once been mistaken for smallpox. In some persons symptoms of poisoning may be produced by a quantity of arsenic so small as to be without discoverable effect on the average individual. Instances of hypersensitiveness are frequently found among groups of persons equally exposed to industrial poisons. The same exposure to carbonmonoxide may prove fatal to one man and not to his companion. An unventilated kitchen gas range may be productive of habitual ill health in one member of a household and without apparent effect on the others.

Substances like arsenic and carbonmonoxide are, of course, essentially poisonous and destructive to the bodily cells, while the food proteins mentioned above are potentially nutritious, but probably in both instances the same biological process of cellular nutrition and defense is operative. There are certain generally accepted theories and hypotheses regarding this process, and they serve fairly well to explain why under certain conditions bodily cells may react to inherently harmless proteins, as to a poison, or why to a certain extent a tolerance of a substance which is essentially poisonous may develop. Our hypotheses cover the phenomenon of desensitization, for hypersensitiveness may under certain conditions be

removed. Hypersensitiveness to common food substances sometimes even disappears spontaneously.

When animal sera began to be injected for the prevention and treatment of disease it was found that a person in some way might have become so sensitive to a protein constituent of such foreign serum that its administration for the purpose of preventing or treating a disease had dangerous and sometimes fatal results. There have been numerous instances of death in such persons following the administration of even a small dose of diphtheria antitoxin for prophylactic purposes. It was also found that the administration of a small amount of a serum, as for example, to prevent a disease, would so sensitize the person to the serum that a subsequent dose would kill him. Our theories in this matter have worked well for various practical purposes. They have led us to eliminate from sera or biological products in the course of their preparation unnecessary proteins with dangerous possibilities. They have shown the advisability of "desensitizing" patients as a precautionary measure so as to obviate possibly dangerous results from the administration of the serum. Such desensitization so far as sera used for the treatment of the disease is concerned is effected by the preliminary administration of small amounts of the serum.

The administration of repeated and increasing doses of the offending protein has often been found likewise practicable in desensitizing persons to such substances as the pollen of plants which cause their trouble by direct contact with the respiratory mucous membrane, but in dealing with hypersensitiveness to common articles of food proteins both theory and practice leave considerable yet to be learned.

It would appear, however, that the tendency of a person's bodily cells to become hypersensitive to ordinarily harmless proteins, *sensitivity*, as it may be called, is often hereditary in character. While not refuting the claim that sensitivity is hereditary, experience suggests that the later acquisition of *sensitivity* when it occurs may sometimes at least be related to the absorption of toxic products from chronic infections. Experience has shown that if a person gives a hypersensitive reaction to one protein, as to one article of food for example, he will probably be found to show a similar reaction to others. Experience would indicate that overindulgence in an article of food may be capable of producing a hypersensitive reaction to its proteins, but that the consumption of the food may not be necessary in order to bring about such a reaction. Experience shows that hypersensitiveness to a food protein may appear without imaginable cause, and that it may in like manner disappear, or that it may be permanent. Total abstinence from an

offending food for two or more years is quite as likely to be followed by the disappearance of a hypersensitive reaction to the protein as any other procedure which can be regarded as practicable.

It is customary to test a person for hypersensitiveness to a substance by introducing into the person's skin an extracted protein of the substance in practically the same way as the Schick test for susceptibility to diphtheria or the Von Pirquet tuberculin test is made. The appearance of signs of active irritation, or a wheal, at the site of the inoculation is supposed to indicate an abnormal reaction to the protein. In competent hands and with properly prepared protein extracts there can be no question of the practical diagnostic value of this procedure. As with the Schick and Von Pirquet tests, however, inconsistent results are sufficiently frequent to tend to shake confidence in the procedure as an infallible diagnostic guide. Then, too, it may tend to develop skepticism on the part of both physician and patient as to the practical value of the procedure when symptoms do not disappear on cessation of exposure to an apparently responsible protein or that a person shows no recognizable ill effects from contact with a protein to which he shows a definite cutaneous reaction.

Practical experiences like those just referred to combined with the unsatisfactory state of our knowledge regarding the causes and significance of an abnormal reaction of bodily cells to essentially harmless and even potentially beneficent proteins is doubtless accountable for the fact that sensitivity has not yet begun to receive the attention which it deserves.

The subject is worthy of greater attention if for no other reason than the possible relation of sensitized tissues to the development of a high blood pressure or to the actual production of cardio vascular degeneration. Even in other conditions to which a possible relationship is of a less speculative character, protein sensitivity is likely to be the last thing to receive consideration when the cause of ill health is sought. Yet such consideration is frequently rewarded by the prompt disappearance of a persistent irritation of the respiratory tract, or of a troublesome skin affection or of a digestive derangement when investigation has pointed to some protein as presumably responsible and contact with it is avoided.

When protein sensitivity exists in childhood it becomes of special practical importance. In the standardized procedure for the promotion of child welfare, tonsils hypertrophied in their struggle with the products of infection are cut out as a matter of course. If the troublesome symptoms which persist after their removal are due in part to a protein hypersensitiveness to the dandruff from the household dog or cat the discovery is rarely made. Continued

evidence of ill health in a child whose tonsils and adenoids have been removed and whose heart and lungs appear to be normal is likely to be classified as a case of "under nourishment," to be remedied by the persistent administration of the standard assortment of calories and vitamines.

To supply these desired qualities, it is safe to assume that the child is going to be forced to consume foodstuffs also possessing possibilities other than those which will be considered.

By the way of examples, the following may be mentioned: Cow's milk is an animal secretion of definite food value which has become so interwoven in the human dietary that an effort to exclude it from the diet of children generally would undoubtedly be of more harm than benefit, even conceding that cow's milk is the secretion of the only domestic animal whose susceptibility to tuberculosis is comparable to human susceptibility and that in addition milk is constantly serving as a means of transmission of all sorts of acute infections. It may be possible, theoretically, at least, to avoid dangers of this character, but in using cow's milk as a child's food, there are other matters worthy of consideration. Cow's milk is designed by nature to supply the early needs of a young animal markedly different in its digestive apparatus and other biological characteristics from a human being. For example, a calf may be expected to attain weight of 600 or 700 pounds in two years. In accordance with this physical expectation, cow's milk contains lime salts in an amount which overloads the eliminative organs of a child with unneeded material of this sort.

On the other hand, a calf's stomach capacity is relatively larger than that of an older child and a very liberal daily amount of cow's milk not only fails to provide for actual nutritive needs of a growing child, but deprives it of room and appetite for food which a young human animal was intended to eat. In various ways, children present unmistakable evidence from time to time that in other respects cow's milk is unsuited to their nutritional needs, nevertheless in some more or less mysterious manner most infants born today manage to utilize cow's milk with a sufficient degree of success to enable them to reach childhood alive even though often in an unsatisfactory physical condition. In many such instances, cutaneous tests have indicated a hypersensitiveness to the proteins of cow's milk and its withdrawal from the child's diet has been followed by a rapid improvement in the child's health.

Spinach is another substance which standardized practice endeavors to incorporate into an "undernourished" child's system. Its imaginary virtues are largely dependent on the fact that it contains iron. It also contains oxalic acid which combines with

the superfluous lime salts from cow's milk to load a child's excretory organs with oxalate of lime. If one makes daily microscopic examinations of the urine of a child that is being regularly given milk and spinach, he will not have to make many such examinations before he will find blood from lesions produced in the urinary tract by the sharp oxalate of lime crystals. We may not know exactly how the foundations of kidney stones are laid, but we do know that they are most frequently made of oxalate of lime and examinations of the kind just referred to will incline an unprejudiced observer to take chances with soup bones, liver and roast beef rather than with spinach to supply a child's needs for iron.

There is another ground for regarding spinach with suspicion. Tests for hypersensitiveness to spinach show cutaneous reactions to be so common as to indicate that spinach may contain proteins which are inherently poisonous.

For some reason, oatmeal enjoys the favor of those who are likely to dictate the supposed needs of the "undernourished" child. Oatmeal is potentially irritating to the digestive tract. By many it is tolerated and doubtless utilized to advantage, but not by all. Its effect on the individual child ought to be watched and signs of intestinal irritation should not be regarded as a confirmation of any presumably desirable property of oatmeal. Symptoms of irritation of the digestive tract may be entirely due to the improper or insufficient cooking of the oatmeal. Such symptoms may be attributable to the physical condition or to some biological peculiarity of the child, but it is also to be remembered that hypersensitiveness to one or more cereals is more common than to any other substances. This alone makes it advisable to test out a child in ill health for hypersensitiveness to oatmeal before giving this cereal a prominent place in the child's diet.

Hen's eggs add highly desirable elements to the average human diet, yet of all articles which will form a regular part of the menu customarily prescribed for the "undernourished" child, an inability on the part of a child to utilize eggs properly, when such inability exists, is perhaps most likely to be recognized. Trouble may perhaps be caused by the yolk fat. Perhaps digestive difficulty is to be ascribed to the form or consistency in which the eggs are served and eaten. Hypersensitiveness to eggs, either to the yolk protein or the protein of the white, or to both, is, however, not infrequent in children, and to such a child eggs may be assumed to be poisonous.

To a considerable extent adults learn to avoid articles of food which disagree with them. They often also form unjustifiable prejudices in this matter. A child who listens to expressions of opinions and likes and dislikes with respect to articles of food will

develop cranky eating habits of its own, often to the extent of causing some serious defective nutritional condition. Sickness and habit, too, may tend to a dangerous restriction of a child's diet. Older children seldom take readily to foods to which they are unaccustomed.

On the other hand, a child's objections to certain articles of a presumably needed dietary are not to be looked on as evidence of perversity or bad training and disregarded until the child's stomach actually rebels. The attitude of a child in this matter may be an instinctive self-protection. It is an interesting fact that a young child usually gives a history of a pronounced dislike of the foods to which cutaneous test indicate a protein hypersensitiveness.

CHANGE IN TUBERCULOSIS CONTROL.

On April 1, in accordance with an ordinance unanimously accepted by his Honor the Mayor, and the City Council, the powers, duties and responsibilities for the control of tuberculosis were transferred from the trustees of the Boston Sanatorium to the Health Department and the trustees of the Boston City Hospital.

The Board of Trustees of the Boston Sanatorium was established in 1906 and shortly after their organization the Mattapan Hospital for Consumptives was built. The Out-Patient Department during all of these years concerned itself with the diagnosis of tuberculosis and the follow-up in the home by nurses and physicians.

Recent surveys of tuberculosis in Boston have strongly recommended a change in organization, particularly stressing the responsibility of the Health Department in the field of tuberculosis and urging that the control of this disease be vested in this official body. It was also recommended that the clinics be decentralized, thereby presenting more practical and easier opportunities for clinic examination in the various sections of the city rather than at one central clinic.

These surveys also pointed out that the hospital care of the tuberculous was very properly the function of the City Hospital.

In accordance with these recommendations and after much consideration and discussion the following ordinance was drafted and adopted and the official taking over completed with the abolishment of the trustees of the Boston Sanatorium.

The Health Department is to conduct the tuberculosis clinics at the various health units and such other stations as may appear necessary. The Division of Tuberculosis is to be organized and the department headed by a division chief whose responsibilities will include the promotion of an educational campaign having in mind

the social, economic and other phases which enter into the control of tuberculosis. The City Hospital assumes the responsibility for the bedside care of the tuberculous at Mattapan.

AN ORDINANCE RELATING TO THE BOSTON SANATORIUM DEPARTMENT.

Be it ordained by the City Council of Boston as follows:

SECTION 1. The powers and duties of the trustees of the Boston Sanatorium Department exercised and performed in connection with the buildings and work carried on in the Mattapan district are hereby transferred to the trustees of the Hospital Department who, in addition to their other powers and duties, shall hereafter exercise said powers and perform said duties.

SECT. 2. All other powers and duties of the trustees of the Boston Sanatorium Department and more especially those powers and duties in connection with the Out-Patient Division are hereby transferred to the Health Commissioner who, in addition to his other powers and duties, shall hereafter exercise and perform said powers and duties.

SECT. 3. The offices of the trustees of the Boston Sanatorium Department are hereby abolished.

DETERIORATION OF COD LIVER OIL.

In advising the use of cod liver oil for any of the various conditions for which it may be taken with benefit, either by children, or adults, we should not fail to call attention to the care which is necessary in order to preserve its valuable qualities.

Cod liver oil loses these qualities rapidly on exposure to air. Apparently a process of oxidation takes place which destroys elements commonly referred to as vitamines. Changes in the fatty contents also occur rendering the oil more objectionable to the taste and more likely to remind one of its presence in the stomach.

A bottle of cod liver oil completely filled and hermetically sealed as it is customarily sold, will keep almost indefinitely because the air with its oxygen is excluded from contact with the oil. When the bottle is once opened, however, and air is admitted to the bottle in increasing amounts, as the oil is being taken, and the level of the oil in the bottle is steadily lowered, the exposure of the oil to the increasing amount of air in the bottle causes the oxidation of the remaining oil to proceed with ever-increasing rapidity. The process is, of course, hastened by shaking the bottle and mixing the air with the oil, something which one is likely to do before taking the oil, as "shaking before taking" is often a highly important procedure in administering a medicinal mixture.

CLASSIFICATION OF PULMONARY TUBERCULOSIS.

The following is the classification adopted by the American Sanatorium Association and by the National Tuberculosis Association.

Schema for the Classification of Patients on Examination.

LESION.

Minimal (Incipient).— Slight lesion limited to a small part of one or both lungs. No serious tuberculous complications.

Moderately Advanced.— A lesion of one or both lungs, more widely distributed than under *minimal*, the extent of which may vary, according to the severity of the disease, from the equivalent of one third the volume of one lung to the equivalent of the volume of an entire lung with little or no evidence of cavity formation.

No serious tuberculous complications.

Far Advanced.—A lesion more extensive than under *moderately advanced*. Or definite evidence of marked cavity formation. Or serious tuberculous complications.

SYMPTOMS.

A. (*Slight or None.*)— Slight or no constitutional symptoms including particularly gastric or intestinal disturbance or rapid loss of weight; slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours. Expectoration usually small in amount or absent. Tubercle bacilli may be present or absent.

B. (*Moderate.*)— No marked impairment of function, either local or constitutional.

C. (*Severe.*)— Marked impairment of function, local or constitutional.

This classification provides for the following groups and subgroups:

Minimal A.	Moderately Advanced A.	Far Advanced A.
Minimal B.	Moderately Advanced B.	Far Advanced B.
Minimal C.	Moderately Advanced C.	Far Advanced C.

Schema for the Classification of Subsequent Observations.

Apparently Cured.— All constitutional symptoms and expectoration with bacilli absent for a period of two years under ordinary conditions of life.

Arrested.— All constitutional symptoms and expectoration with bacilli absent for a period of six months; the physical signs to be those of a healed lesion; roentgen findings to be compatible with the physical signs.

Apparently Arrested.— All constitutional symptoms and expectoration with bacilli absent for a period of three months; the physical signs to be those of a healed lesion; roentgen findings to be compatible with the physical signs.

Quiescent.— Absence of all constitutional symptoms; expectoration and bacilli may or may not be present; physical signs and roentgen findings to be those of a stationary or retrogressive lesion; the foregoing conditions to have existed for at least two months.

Improved.— Constitutional symptoms lessened or entirely absent; cough and expectoration with bacilli usually present; physical signs and roentgen findings to be those of a stationary or retrogressive lesion.

Unimproved.— Essential symptoms unabated or increased; physical signs and roentgen findings to be those of an active or progressive lesion.

Died.

RABIES IN BOSTON.

During the year 1925 nine dogs which were brought to the attention of the Health Department were found to have rabies. During 1926 the number of such dogs increased to thirty. This year, up to March 20, eighteen rabid dogs have come to the attention of the Health Department.

The Health Department is co-operating with the police to reduce the danger to human beings which the situation presents. As one result, stray and unlicensed dogs will undoubtedly be greatly reduced in number in the next few weeks.

Past experience everywhere, however, has repeatedly demonstrated that attempts to eliminate unlicensed dogs and to restrain others, by muzzle or leash, never work satisfactorily either from the point of view of human beings or the dogs.

Those who have had experience in this matter, therefore, have looked with favor on efforts to devise a feasible method of immunizing dogs against rabies. The immunization of animals against rabies has, of course, been practised ever since Pasteur's time, but until recently the necessity of administering the anti-rabic virus in a large number of successively increasing doses in order to produce immunity made the immunization of animals generally impracticable.

In 1921 two Japanese investigators announced their development of a form of anti-rabic virus which required only one injection to produce immunity. During the last five years the claims of these investigators have been verified not only in Japan, but all over the world. In this country immunization of dogs as a pre-

requisite to the issuance of a dog license is now required by statutory law in some states and by the municipal ordinances of a constantly increasing number of cities. This vaccine is now prepared and sold to the trade by all the larger manufacturers of biological products in this country.

Veterinarians generally are now familiar with its administration. Anyone who can afford to keep a dog has no longer now an excuse for not having the dog immunized against rabies. In telephoning the veterinarian to come to immunize the dog, the owner may feel that he is not only protecting his dog against a real danger but himself and his family as well.

SURVEY OF THE QUALITY OF BOSTON MARKET MILK.

The following is the result of a survey made of market milk sold in Boston by dealers and chain stores during March, 1927. In Massachusetts the statute law requires a minimum of 12 per cent solids and 3.35 per cent butter fat.

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter
	Per Cent.	Per Cent.	
Alden Brothers	12.61	3.95	18
Allen, Fred H	12.52	3.83	48
Antetomasso, Peter	12.44	3.80	12
Barron, C. W	14.60	5.60	10
Bergmann, J. H	12.69	4.01	30
Bolio, William	12.81	4.11	148
Brandley, F. J. & P. J	13.00	4.38	12
Casey, James	12.64	4.00	24
Cashin, James	12.40	3.83	36
Cedar Hill Farms	12.78	4.33	15
Chapin, George	12.30	3.70	10
Childs Brothers	12.70	3.98	43
Clapp, Frank L	12.74	3.95	212
Clark, Levi	12.18	3.72	72
Converse, M. M	12.67	3.93	68
Corkery, J. J	12.33	3.71	100
Cosgrove, Martin S	12.81	3.88	15
Cummings, F. S	12.15	3.71	12
Cunningham, Paul	12.36	3.55	40
Cusick, W. H	12.87	3.90	70
Dean, Louis W	13.12	4.20	22

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Deerfoot Farm	12.72	4.11	19
Denehy, Timothy	12.37	3.63	25
Driscoll, William B., Company	12.63	3.93	19
Duggan Brothers	12.74	3.86	17
Edgerly, Frank S	12.42	3.80	12
Elm Spring Farm Company	12.26	3.80	173
Ferguson, M. D	12.32	3.65	66
Furbush, A. J	13.14	4.03	17
Garfield, Mason	14.82	5.43	16
Garvin, C. E	14.00	4.80	15
Giroux, J. E. & H. J	12.41	3.83	20
Griffin, Joseph L	12.61	3.78	20
Gushee, C. W	12.47	3.75	24
Herlihy Brothers	12.31	3.68	99
Hickey, M. J	12.30	3.78	34
Holden, John E	12.52	3.83	39
Hood, H. P., & Son	12.47	3.81	29
Hutchinson, F. T	11.95	3.53	34
Jones, William T. Company	12.73	3.95	24
Kendall Brothers	12.25	3.71	380
Kingston, Samuel	13.01	4.12	23
Knapp, George J	12.82	3.68	60
Lang Brothers	12.55	3.80	19
Larson, Charles	12.30	3.68	22
Lincoln Farms	12.18	3.62	103
Lyndonville Creamery*	12.99	4.12	18
Manning, Peter	12.50	4.00	18
Maple Farm Milk Company	12.28	3.57	88
McAdams, J. F	12.47	3.83	15
McKernan, James	12.58	3.88	31
Millwood Farms	12.33	3.75	54
Munchback, George	12.73	3.98	50
Newton & Pope	12.79	3.95	214
Noble, William F., & Co	12.60	3.93	14
Robinson, A. J	12.46	3.80	22
Schuster, Adam	12.27	3.78	20
Seven Oaks	12.51	3.77	17
Shick, Jacob	12.69	3.90	105

* Errata.—In the previous issue of the "Monthly Bulletin" (March), Lyndonville Creamery should have been credited with 12.96 per cent total solids instead of 1.96 per cent.

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Somerset Farms	12.89	4.18	11
Sterling Farms Milk	12.73	3.83	19
Stone, H. L.	12.26	3.78	32
Stuart, W. E.	12.34	3.95	18
Swett, Warren	11.75	3.47	36
Turner Center System	12.63	3.95	30
United Farmers Co-operative Creamery Company	12.79	4.02	19
Vartanian S.	12.16	3.80	10
Vartanian, K.	12.60	4.00	14
Walker-Gordon	12.41	3.93	9
Weiler, E., & Sons	12.48	3.90	128
Werner Company	12.45	3.79	28
Westwood Farms	12.44	3.75	16
White Brothers	12.84	3.98	17
Whiting Milk Company	12.46	3.82	22
Whittemore, W. D.	12.84	3.93	23
Wiswall, George A.	12.65	3.98	26
Woodland, Charles L.	12.73	4.55	19

CHAIN STORE MILK.

Name of Dealer.	Supplied by.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
		Per Cent.	Per Cent.	
The Great Atlantic & Pacific Tea Company.	H.P. Hood & Sons Company,	12.23	3.78	30
The Cloverdale Company	Turner Center System, Inc.,	12.51	3.82	18
John T. Connor Company	Bellow Falls Co-operative Creamery Company.	12.74	4.05	22
Economy Grocery Stores	Whiting Milk Companies	12.17	3.75	16
The Ginter Company	United Farmers	12.86	4.05	18
Morgan Brothers Company	Morgan Brothers	12.65	4.03	370
O'Keefe's, Inc.	Bellow Falls Co-operative Creamery Company.	12.76	4.12	34
Winer, M.	Hyman Winer	12.92	4.10	356

SLEEP.

Sleep is the most important thing in the world, more important even than food. For we eat to sleep—but we sleep to live. Men have gone sixty-three days without food and a week without water — but they cannot last more than ten days without sleep.

Loss of sleep causes a form of starvation, for the food we eat is digested and transmitted into new muscle, brain, blood, and nerve cells only while we are asleep. Endurance racers prove this. Those engaged in six-day bicycle races and other witless forms of diversion eat four or five times as much food as does the ordinary man. Yet the end of the contest finds them hollow-eyed and cadaverous from the loss of sleep more than from the physical exertion.

Sleep recharges the exhausted body batteries and fills the organic furnace with fresh fuel. Sleep is a positive process — not a negative one. It isn't merely a stopping of bodily activity. It's the substitution of a constructive process for a destructive one.

Only while we are unconscious do we fully recuperate. The deeper the sleep, the quicker the recuperation. The lighter and the more disturbed the sleep, the more we need of it, the longer it takes to effect repair. — *Clinical Medicine.*

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING MARCH, 1927.

Classification.	Number.	Percentage.
After death	6	9.23
Seven days or less	5	7.71
Eight to fourteen days, inclusive	3	4.61
Fifteen to twenty-one days, inclusive	—	—
Twenty-two to thirty-one days, inclusive	5	7.71
Within First Month. (Total)	19	29.26
Within second month	7	10.77
Within third month	1	1.53
Within fourth month	4	6.15
Within fifth month	4	6.15
Within sixth month	2	3.08
Within seventh month	—	—
Within eighth month	2	3.08
Within ninth month	1	1.53
Within tenth month	1	1.53
Within eleventh month	1	1.53
Within twelfth month	1	1.53
Within First Year Preceding Death. (Total)	43	66.14
Within second year	6	9.23
Within third year	5	7.71
More than three years	11	16.92
Grand totals	65	100.00

RULES OF HYGIENE.

1. Ventilate every room you occupy.
2. Wear loose, porous clothing suited to season, weather, and occupation.
3. If you are an indoor worker, be sure to get recreation outdoors.
4. Sleep in fresh air always; in the open if you can.
5. Hold a handkerchief before your mouth and nose when you cough or sneeze and insist that others do so too.
6. Always wash the hands before eating.
7. Do not overeat. This applies especially to meats and eggs.
8. Eat some hard and some bulky foods; some fruits.
9. Eat slowly — chew thoroughly.
10. Drink sufficient water daily.
11. Evacuate thoroughly, regularly.
12. Stand, sit, and walk erect.
13. Do not allow poisons and infections to enter the body.
14. Keep the teeth, gums, and tongue clean.
15. Work, play, rest, and sleep in moderation.
16. Keep serene. Worry is the foe of health. Cultivate the companionship of your fellow men.
17. Avoid self drugging. Beware the plausible humbug of the patent medicine faker.
18. Have your doctor examine you carefully once a year. Also consult your dentist at regular intervals.— (U. S. P. H. S.)

SUMMARY OF THE WORK, MARCH, 1927.

BUREAU OF ADMINISTRATION.

Prosecutions ordered	6	Personnel:	
Legal notices	284	Appointment, permanent	1
Lying-in Hospital approved	1	Salary increase, provisional	1

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	1,223	Milk	224
Denatured alcohol	5	Offensive trade	1
Dump approved	12	Pedlers	101
Dump permit revoked	1	Stable permits, final	2
Grease	27	Stable permit refused	1
Garbage permit revoked	1	Undertaker	1
Hen licenses granted	571	Hen permits revoked	2
Manicure-massage	78	Hen permit refused	1

MEDICAL DIVISION.

Visits:		Cases brought to Boston for treatment	126
By medical inspectors	1,970	Deaths investigated	12
By veterinarian	259		
By investigator	276		

NURSING SERVICE.

Homes Visited		16,406
Child Hygiene:		
New cases visited	1,766	
Old cases revisited	8,567	
Total child hygiene visits *		10,333
Communicable Diseases:		
New cases visited	2,028	
Old cases revisited	6,198	
Total communicable disease visits †		8,226
Miscellaneous Visits:		
Infant death investigations		86
Maternal death investigations		7
Patients accompanied to hospital		1
Visits to day nurseries		59
Visits to parochial school children		16
Visits to parochial schools		60
Posture visits		47
Nutrition visits		8
Total number of all visits		18,843
Number hours spent in station by nurses		1,674
Number hours spent in conference ‡		1,988
Number hours spent in nurses' conference		8

* Includes 167 wrong addresses; 1,124 not seen; 1,291 absent visits.

† Includes 185 ophthalmia cases: 42 wrong addresses; 128 not seen; 170 absent visits.

‡ This includes child health conferences, vaccination and diphtheria immunizations at stations.

HEALTH UNITS.

MISCELLANEOUS UNIT ACTIVITIES:	
Complaint of insanitary conditions	14
Number of persons given health and other information	335
City visitors	82
Out of city visitors	9
Routine medical examination of adults	14
DENTAL SERVICE:	
Number of children's teeth cleaned	521
Number of children treated	1,581
Prophylaxis	4,252
EYE SERVICE:	
New cases	17
Number of refractions	62
Number of glasses prescribed	12
Number of examinations for diagnosis	47
MEDICAL DIVISION OF HEALTH DEPARTMENT:*	
Work performed by medical inspector:	
Visits made by medical inspector in the districts	329
Vaccinations performed by medical inspector	80
Number of vaccination certificates issued	32
Antitoxin, antityphoid and toxin-antitoxin administered	85
Number of children examined for day nurseries	62
Nurses' visits:†	
Communicable disease visits by nurses in district	1,285
CHILD HYGIENE DIVISION OF HEALTH DEPARTMENT:‡	
Number of child health conferences	21
Total attendance at child health conferences	6,219
New babies at conferences	773
Homes visited by nurses	3,912
Home visits to babies and pre-school children	2,716
Infant deaths investigation visits	4
Special visits	9
Number of posture classes	20
Attendance at posture classes	521
BOSTON SANATORIUM:	
Calls made by nurses in the district	1,011
BOSTON LYING-IN HOSPITAL:	
Pre-natal Clinic:	
Number of clinics	7
Attendance	149
COMMUNITY HEALTH ASSOCIATION:	
General Division:	
Home visits by nurses	5,182

* Included in "Medical Division" report.
† Included in "Medical Division" and "Nursing Service" report.
‡ Included in "Child Hygiene Division Report" and "Nursing Service."

Boston Dispensary:

Calls by district physician	41

State Department of Mental Diseases:

Number of clinics	9
Attendance at clinics	47
Visits of workers	22
New cases	2
American Red Cross, number of classes	7

Infantile Clinic of Children's Hospital:

Number of clinics	2
Attendance	8

MONTHLY REPORT OF VENEREAL DISEASE ACTIVITIES, MARCH, 1927.

SYPHILIS.

Current cases under investigation March 1	5
New cases received during March	18
	23

Disposition of Cases.

Unable to locate	6
Under treatment	6
Under investigation April 1	11
	23
New cases reported by number	69

GONORRHEA.

Current cases under investigation March 1	25
New cases received during March	30
	55

Disposition of Cases.

False address	3
Unable to locate	14
Under treatment	20
Under investigation April 1	18
	55
New cases reported by number	185

SUMMARY.

Current cases under investigation March 1	30
New cases during March	48
	78

Disposition of Cases.

False address	3
Unable to locate	20

Under treatment	26
Under investigation April 1	29
	78
Number of visits of venereal investigator	276

VENEREAL COMPLAINTS AND SOURCES OF INFECTION, AND VENEREAL DEATHS.

Investigated:	
New cases reported during March	2
Unable to locate	2
Venereal deaths investigated	1

CHILD HYGIENE DIVISION.

REPORT OF TOXIN-ANTITOXIN ADMINISTRATION AND VACCINATIONS AT CHILD HEALTH CONFERENCES DURING MARCH, 1927.

Station.	Toxin-Antitoxin.			Vaccinations.
	First.	Second.	Third.	
Old Town Hall, Brighton	2	3	3	9
31 Lincoln street, Allston	6	4	3	3
Charlestown Municipal Building	4	5	5	4
Codman Square, Dorchester	11	18	17	6
Columbia Road Municipal Building	2	2	2	7
7 Gordon place, Dorchester	—	1	3	5
East Boston Health Unit	1	—	1	6
Hyde Park Municipal Building	—	1	1	9
Curtis Hall, Jamaica Plain	—	1	3	2
41 North Margin street	28	21	26	4
Roslindale Municipal Building	—	—	—	5
Beth Israel Hospital	—	—	2	—
Children's Hospital	3	2	2	3
1049 Columbus avenue	4	4	4	46
Vine Street Municipal Building	2	3	3	24
140 Dorchester street	7	17	17	8
70 Emerald street	1	1	1	—
Shawmut Avenue Municipal Building	1	2	3	3
122 Tyler street	17	17	15	4
17 Blossom street	1	—	3	—
Totals	90	102	114	148
Totals, all stations			306	

MONTHLY REPORT OF CHILD HEALTH CONFERENCES MARCH, 1927.

Station.	Number of Babies.	Number of Pre-school.	Total Attendance.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	259	20	279	28	5	33	5	56
31 Lincoln street, Brighton	94	14	108	15	9	24	5	22
Charlestown Municipal Building	305	36	341	34	1	35	9	38
Codman square, Dorchester	516	56	572	76	8	84	9	64
Columbia Road Municipal Building	592	7	599	60	4	64	9	67
7 Gordon place, Dorchester	301	8	309	42	5	47	5	62
East Boston Health Unit	417	87	504	68	12	80	9	56
Hyde Park Municipal Building	141	18	159	25	1	26	4	40
Curtis Hall, Jamaica Plain	254	56	310	32	18	50	5	62
41 North Margin street	232	134	366	38	23	61	10	37
Roslindale Municipal Building	176	19	195	23	4	27	4	49
Beth Israel Hospital	165	7	172	20	1	21	5	34
Children's Hospital	185	12	197	24	4	28	5	39
1049 Columbus avenue	425	34	459	74	10	84	10	46
Vine Street Municipal Building	262	11	273	59	—	59	4	68
140 Dorchester street	357	81	438	98	46	144	9	49
70 Emerald street	171	24	195	21	5	26	5	39
Shawmut Avenue Municipal Building,	234	19	253	28	1	29	5	51
122 Tyler street	190	50	240	12	1	13	5	48
17 Blossom street	322	66	388	44	8	52	9	43
Totals	5,598	759	6,357	821	166	987	131	49

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

Stores inspected	4,524
Sanitary defects remedied	163
Complaints at office	34
Referred to Sanitary Division	14
Notices to abate nuisances	153
Court cases	13
Convictions	7
Fines	$280
Discharged	3
Filed	2
Filed after conviction	1
Defaulted	1

Applications for pedlers' licenses approved	95
Vehicles inspected and approved	496
Laboratory Examinations:	
Bacteriological	5
Chemical	3

CONDEMNATIONS.

Meats:		Veal	432 pounds
Beef	2,893 pounds	Fish:	
Corned beef	18 pounds	Miscellaneous fish	30 pounds
Deviled chicken	125 cases	Sardines	150 pounds
Fowl	13½ pounds	Smelts	15 pounds
Frankfurters	38 pounds	Vegetables:	
Hamburger	10 pounds	Onions	4,200 pounds
Hog rinds	700 pounds	Spinach	828 bushels
Kidney	15 pounds	Tomatoes	23 cases
Pig stomach	100 pounds	Apples	31 bushels
Smoked shoulder	12 pounds	Oranges	326 boxes
Spare ribs	10 pounds	Salt	150 pounds

LIVE STOCK INSPECTION (Brighton Abattoir).

Cattle inspected	2,661	Parts condemned (lbs.)	870
Calves inspected	7,055	Animals condemned	132
Swine inspected	4,794		

DAIRY DIVISION.

Total inspection	1,287	Total cattle inspected	7,053
Dairies inspected	386	Inspections of milk plants and licensed dealers	439
Scoring above 50*	295	Bacteriological examinations	16
Scoring below	91	Country creamery inspections	17
With milk rooms	308	Sediment tests	403
Without milk rooms	78		
Inactive	20		

* Passable mark.

BUREAU OF MILK INSPECTION.

SAMPLES EXAMINED.

CHEMICAL:	
Milk from wagons	268
Milk from stores	967
Milk brought by citizens	29
Vinegar	50
Butter	2
Water	3
Sewage	4
Soap	1
Liquor	15
Sugar	1
Cocoa	1
Sausage	3

Bacteriological:	
Milk	635
Ice cream	105
Court cases	12
Fines	$120

SANITARY INSPECTION.

Original inspections	3,026	Complaints investigated	532
New reports	3,210	Court cases authorized	2
Reinspections	6,747	Fines	$5
Legal notices served	230		

BACTERIOLOGICAL LABORATORY.

Diphtheria	1,321
Tuberculosis	300
Typhoid	40
Gonorrhea	852
Gonorrheal ophthalmia	99
Syphillis	1,508
Other examinations *	41
Bacteriological examinations of milk	635
Bacteriological examinations of ice cream	105
Water from schools examined for pollution	9
Water from swimming pools examined for pollution	80
Extra water examined	6

* Malaria, 3; feces for typhoid, 11; urine for typhoid, 10; urinary tuberculosis, 9; paratyphoids, 2; dark field examinations, 2; blood culture, 1; pus from abscess, 1; blood smear, 1; candy for poison, 1.

It is due to ignorance, and is a reflection upon the intelligence of any person, to become ill with typhoid fever or smallpox. Protective means have been discovered by which these diseases may be banished. It has been demonstrated that vaccination will protect you. Why not take advantage of this really free protection? Consult your family physician or the Health Department before you leave for your vacation.

VACCINATION IS SAFE — IT IS SOUND — IT IS SURE.

VITAL STATISTICS, MARCH, 1927.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING MARCH, 1927, WITH COMPARATIVE FIGURES FOR MARCH, 1926.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
All Causes:						
Total deaths	1,068	1,447	—379	16.16	22.06	—5.90
Nonresidents deducted	869	1,237	—368	13.15	18.86	—5.71
By Age:						
Under one year	129	173	—44	1.95	2.64	—.69
One year to four years, inclusive	33	109	—76	.50	1.66	—1.16
Sixty years and over	447	558	—111	6.76	8.51	—1.75
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	57	70	—13	.86	1.07	—.21
Arteriosclerosis	21	48	—27	.32	.73	—.41
Heart disease	216	279	—63	3.27	4.25	—.98
Nephritis, chronic	75	71	+4	1.13	1.08	+.05
Infant and Maternal Mortality:						
a. Total registered live births	1,405	1,625	—220	21.26	24.77	—3.51
b. Registered stillbirths	34	44	—10	.51	.67	—.16
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	23.63	26.36	—2.73
c. Deaths of mothers from causes incident to childbirth	13	17	—4	.20	.26	—.06
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	9.03	10.18	—1.15
Deaths of children in first year of life	129	173	—44	1.95	2.64	—.69
Deaths in first year per 1,000 live births	.....	.....	.....	91.81	106.46	—14.65
Violence:						
Accidents	61	57	+4	.92	.87	+.05
Homicides	1	5	—4	.015	.08	—.06
Suicides	7	11	—4	.10	.17	—.07
Miscellaneous:						
Alcoholism, acute or chronic	10	18	—8	.15	.27	—.12
Broncho-pneumonia	72	147	—75	1.09	2.24	—1.15
Cancer	101	103	—2	1.53	1.57	—.04
Cirrhosis of the liver	7	7	—	.10	.11	—.01
Diabetes mellitus	12	25	—13	.18	.38	—.20
Diarrheal diseases, children under two years of age	5	6	—1	.07	.09	—.02

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	—	—	—	—	—	—
Deaths.	—	—	—	—	—	—
Cerebrospinal meningitis.....Cases..	5	6	—1	.07	.09	—.02
Deaths.	5	5	—	.07	.08	—.01
Diphtheria.....Cases..	156	97	+59	2.36	1.48	+.88
Deaths.	4	8	—4	.06	.12	—.06
Influenza.....Cases..	33	211	—178	.50	3.22	—2.72
Deaths.	7	20	—13	.10	.30	—.20
Measles.....Cases..	254	805	—551	3.84	12.27	—8.43
Deaths.	1	8	—7	.015	.12	—.105
Pneumonia (lobar).....Cases..	157	314	—157	2.37	4.79	—2.42
Deaths.	60	134	—74	.91	2.04	—1.13
Scarlet fever.....Cases..	655	397	+258	9.91	6.05	+3.86
Deaths.	4	5	—1	.06	.09	—.03
Tuberculosis (pulmonary).....Cases..	130	169	—39	1.97	2.58	—.61
Deaths.	65	65	—	.98	.99	—.01
Tuberculosis (other forms).....Cases..	20	24	—4	.30	.36	—.06
Deaths.	6	12	—6	.09	.18	—.09
Typhoid fever.....Cases..	8	5	+3	.12	.08	+.04
Deaths.	—	—	—	—	—	—
Whooping cough.....Cases..	91	762	—671	1.38	11.62	—10.24
Deaths.	3	38	—35	.04	.58	—.54

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1927 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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VITAL STATISTICS.

In the interpretation of death returns Raymond Pearl in his book on medical biometry and statistics warns us that in considering vital statistics, except so far as they relate to total deaths, or deaths in specified age groups, or deaths from suicide, homicide or traumatism, we are dealing with "material which is fundamentally of a dubious character." Raymond Pearl speaks in this instance as a mathematician rather than as a pathologist. The unreliability of official statistics purporting to give the causes of death become very apparent to the mathematician through their failure to conform to the tendencies of errors in scientific observations.

Seventy years ago "drinking cold water" was officially accepted as just as good a cause of death as "alcoholism" is today. Consumption then often included anemia, internal cancer, or any other wasting disease, as well as tuberculosis. Even much more recently "heart failure" constantly served as a convenience in accounting officially for the termination of life from any cause not perfectly obvious.

In the last thirty years much has been done in the compilation of vital statistics to establish order and system where formerly there was chaos. Accepted causes of death for the purpose

of official records have been made a matter of international agreement. As death is usually due to a combination of causes, the cause to be selected to account officially for a death in compiling official vital statistics is likewise a matter of international convention. For instance, the death of a man suffering from tuberculosis and from a valvular disease of the heart, resulting from scarlet fever in childhood, must be officially tabulated as due to tuberculosis. If a person in an advanced state of cancer contracts typhoid fever and dies, death is assigned to cancer. If, as frequently happens, a person has chronic nephritis, and a degeneration of the arteries and heart and dies from a cerebral hemorrhage, death must be charged to the chronic nephritis. If it was a valvular disease of the heart instead of a "myocarditis" death must be tabulated as due to the valvular disease of the heart. If a person has a long standing valvular disease of the heart, and develops a gastric ulcer and dies under an operation therefor, presumably as the result of the heart condition, the death is chargeable officially to the gastric ulcer. The tendency, however, in the recent revision of official rules as to classification is to charge more deaths to the heart, where a heart condition is presumably a factor in causing death, and the statistical increase in deaths from heart disease is doubtless to be accounted for in part by this fact.

The United States has adopted a standard certificate of death which virtually conforms to an international standard.

Besides other information called for by the certificate the following must be furnished by a physician or other person legally competent to submit a death certificate:

The length of time of medical attendance and when last seen alive by the attending physician; the cause of death and the duration thereof; the contributory cause and its duration; where the disease causing death was contracted; whether an operation preceded death, if so, when, and for what reason; whether there was an autopsy; what tests confirmed diagnosis; whether breast fed in an infant under one year.

It is not necessary to look to the limitations of the record clerk of the small town or to the supposed carelessness of country physicans to explain why the carefully prepared scheme just referred to has done no more toward making it safe to draw conclusions from vital statistics. A better insight into the real reasons why statistics of causes of death are still "fundamentally of a dubious character" is to be gained by watching the compilation of vital statistics in a large city like Boston where clerks trained in pathology and an organized medical staff strive to secure as high a degree of accuracy and consistency as is practicable in officially recording causes of death.

Because of the provisions of law and other factors, it is practically impossible for a death to occur in Boston without being recorded at the Health Department. With comparatively few exceptions, deaths come to the knowledge of the Vital Statistics Division of the Health Department through the application of an undertaker for a burial permit. A permit will not be issued except on the presentation of a death certificate satisfactory to the Health Department. By statutory law, the undertaker is required to obtain and the attending physician is required to furnish the information relative to causes of death called for by the standard certificate form.

From thirty to fifty and sometimes more death certificates are presented daily at the Vital Statistics Division. Before issuing a burial permit, each certificate is scrutinized carefully by a trained clerk. If there be any reason to suspect death by "violence," the case is referred at once to the medical examiner. "Violence" is construed to include deaths caused directly or indirectly by traumatism, the action of chemical, thermal or electrical agents, those resulting from injury or infection related to occupation or deaths associated with the interruption of pregnancy. It is customary also to refer sudden deaths from unknown cause to the medical examiner.

If the physician certifying as to causes of death has not seen the deceased for two weeks preceding death or if the physician was not called until within twenty-four hours of death, the case is always referred to the medical staff of the department for investigation.

The clerk examines the physician's certificate not only with respect to its completeness, but with view to the detection of inconsistencies as to the stated immediate and contributory causes of death, the reported duration of each, the nature of the surgical operation, if any, its date, the method of confirming diagnosis, etc.

Where there is merely a lack of completeness or of clarity in the certificate, the clerk may call the signing physician directly, especially if his professional reputation be favorably known to the department, but when the medical or pathological aspect of the death certificate appears unsatisfactory or doubtful, the matter is referred either to the department's medical staff or to the medical examiner.

The scope of the scrutiny which a death certificate presented at the Boston Health Department will receive is indicated by the following official experiences and practices:

Broncho-pneumonia is not regarded as a good, sole cause of death. It may be allowed to pass unchallenged in a young child, but in an adult a fatal broncho-pneumonia will lead to an effort to disclose a contributory cause. Even lobar pneumonia comes in

for special scrutiny, not only because it is an infection to which one is often made vulnerable by some underlying debilitating condition, but because a tendency is encountered to use "lobar pneumonia" as a convenience in accounting for sickness or death when other cause is not apparent.

In instances of deaths attributed in death certificates to lobar pneumonia, the medical staff of the Health Department have found such actual causes as œdema of the lungs from valvular heart disease, perforating duodenal ulcer, diabetic coma, appendicitis, criminal abortion, etc.

A tendency is naturally encountered to try to make myocarditis serve the purpose for which "heart failure" was once so conveniently used. Myocarditis undoubtedly figures more prominently in causes of death in Boston than it ought to, but in such cases, as the result of the persistent skepticism of the Vital Statistics Division, the rest of the death certificate relating to age, contributory causes, their duration, etc., will at least be found to be consistent with a degenerative change in the heart muscle which might justifiably be referred to as "myocarditis." On the other hand, even the undertakers in Boston have learned the futility of trying to obtain a burial permit on a certificate of death from "acute indigestion."

The causes of infant mortality are of special practical importance because of the high cost of the present-day popular intensive child welfare work that is expected to reduce this mortality. There has been a great decrease in Boston in the infant mortality rate, that is, in the number of deaths under one year per 1,000 live births, during the last fifteen years. Statistically, it would appear to be attributable to a decrease in deaths from gastro-intestinal diseases. The relation of this decrease to the pasteurization of the city's milk supply is striking and unmistakable. In other places a relation between the installation in a community of a water-carriage system for the prompt removal of human excreta or the introduction of a pure water supply or even the suppression of breeding places for flies and a decrease in infant mortality has been equally clear. But it is evident that these statistics are not telling the whole story. Boston's decrease in infant mortality has occurred chiefly in infants over a month old. About half the infants who now die in Boston die before they are a month old. Gastro-intestinal infections are likely to be the most conspicuous symptoms of inability of an infant properly to assimilate food, whatever may be the reason.

A critical attitude toward causes of deaths of infants as submitted in death certificates has served to make it clear to the Boston statistical clerks that back of infants' deaths attributed to gastro-enteritis, and other acute infections as well, there is often something

biologically wrong with the infant, very probably a vital defect too intangible to be definitely specified in terms of the present international classification of causes of death. As a consequence, our vital statistics are failing to show the extent to which our infant mortality is a problem in eugenics and not a matter of feeding.

Like infant mortality, the causes of maternal mortality become of special importance because of expensive propositions intended to prevent maternal deaths. Fatalities contemporaneous with childbirth, especially those attributed to "puerperal septicemia" in death certificates submitted, have been investigated by the Boston Health Department, as well as by other agencies. Sometimes, apparently equally well-qualified investigators have with the same evidence before them arrived at different conclusions as to the causes to which death should be ascribed, but such differences of opinion have not been frequent enough to be a matter of serious statistical importance. More often, investigations have disclosed some very obvious pre-existent pathological condition rendering the classification of the death to puerperal septicemia inappropriate. With greater frequency still, as with infant mortality, it becomes evident, in investigating death attributed to puerperal septicemia, that there is an underlying cause, not yet understood, something — or the lack of something — which causes vulnerability to infection and makes common organisms with pathogenic possibilities actually dangerous. With curious constancy, deaths in Boston officially accepted as due to puerperal causes are running year after year at the rate of about seven deaths per 1,000 births. Not all but a considerable proportion of these "causes" are puerperal septicemia and it would seem mathematically improbable that those who escaped puerperal septicemia avoided the exposure which proved fatal to the seven. We are reminded also that infections of obscure cause involving the abdomen or pelvis, and not associated either with parturition or appendicitis, are by no means uncommon causes of death of both women and men.

The factors tending to impair the reliability of vital statistics are not all due to the incompleteness of our knowledge of biology. In a single week, a few years ago, eight death certificates were presented at the Boston Health Department attributing death to encephalitis lethargica. As there had never before been reported in Boston more than an occasional death from this disease, eight deaths in one week were startling, and puzzling also as there had been no reports indicating the presence of an unusual number of cases of the disease in the city. The death certificates came from several different hospitals. Examination of the clinical histories of the cases at all these hospitals showed clearly that not one of

these eight deaths had been due to encephalitis lethargica. Presumably, as the result of recent talk in medical circles about encephalitis lethargica, these patients who had presented on admission to hospital symptoms not inconsistent with encephalitis lethargica were given by the admitting officers of the hospitals a tentative "admission diagnosis" of encephalitis lethargica. When sent for the body by the family, after the patient's death, the undertaker obtained a death certificate from some available hospital officer who, following a common practice on such occasions, went no farther than to look up the admitting diagnosis in the records and put it on the death certificate.

Encephalitis lethargica happens to be one of the diseases cases of deaths of which the Boston Health Department invariably investigates both with view to verification of diagnosis and obtaining epidemiological data. Other more constant favorites of hospital admitting officers, like lobar pneumonia and alcoholism, do not come in for the same degree of attention from the medical staff of the Health Department.

Pulmonary embolism had been appearing on Boston death certificates between twenty and twenty-five times a year previous to ex-President Roosevelt's death. During the week following his death, which was ascribed in the newspapers to this cause, pulmonary embolism appeared as a cause of death in no less than six death certificates presented at the Boston Health Department for burial permits. Pulmonary embolism being a term not acceptable as a primary cause of death without further investigation, many of these certificates were returned for a better cause of death and accepted finally only after all other possible factors had been ruled out. Mortality attributed to this cause continued at this rate in Boston for about a month and then rapidly resumed its former annual rate.

The untrustworthiness of statistics as to causes of death in vital statistics is, however, to be accounted for to a great extent by reasons other than those which have been mentioned.

Official statistics of deaths from certain acute conditions, as anthrax, tetanus, or diphtheria, for example, may be trusted to show with a reasonable degree of approximation the actual number of deaths from the cause stated.

With respect to other acute diseases such statistics may for some particular reason be entirely untrustworthy. Reported deaths from whooping cough, for example, do not begin to indicate its mortality. Whooping cough predisposes to the development of a broncho-pneumonia which is usually the direct cause of death. Broncho-pneumonia may be due to other causes. An attending

physician may, through carelessness, fail to mention the whooping cough as a contributory cause in the death certificate of a fatal case of broncho-pneumonia, but far more often when a physician is called to attend a case of broncho-pneumonia in a young child it is practically impossible for anybody to establish the existence of the pre-existent whooping cough either by clinical or laboratory means. Persons with "whooping cough," especially young children, do not necessarily whoop.

A large proportion of the deaths of human beings are not the result of acute illness. Death, even in those comparatively young, more often marks the termination of a considerable period of symptoms of the improper functioning of one part of the body after another, very much as a cheaply-constructed or a worn-out automobile gives evidence of the approaching end of its practical usefulness. Attention in either case tends to be directed to the most troublesome symptoms for the time being. Diabetes may appear in the death certificate, but there was improper glandular functioning which preceded the diabetes. Perhaps a somewhat similar glandular derangement may make possible the development of cancer.

A person may stick to one physician from the beginning of ill-health until the end. The average individual is, however, inclined to test out cults and fads as well as different physicians, or neglect himself altogether until he finally comes to the attention of the physician whom fate has destined to fill out the death certificate. The patient or the family tells a story which reminds the physician of the recital of the twelfth chapter of Ecclesiastes and often before the physician can translate such a clinical history into a satisfactory pathological concept his patient has gone to his "long home" and the undertaker wants the death certificate.

Usually on such occasions there are considerations of more practical importance to the family and to the physician than an accurate statistical classification of the causes of death. The physician knows that the causes of death inscribed in the death certificate must be statistically acceptable as well as pathologically consistent. In selecting from a complicated clinical picture the features which he will stress in his certificate the physician, be he careless or conscientious, will be influenced by current diagnostic practises which may not be the same as they were a few years before nor will be a few years hence. A capable, careful physician may submit, for example, a death certificate which leads the statistical office to call him up and inquire, "Doctor, did you exclude cancer in this case?" The physician will probably reply, "I thought of abdominal cancer, of course, but I do not feel that the evidence is sufficient to state it in the death certificate either as a direct or

contributory cause of death." Perhaps in a few years with the same sort of evidence before them the physicians may not hesitate to declare cancer to be the cause of death.

The cause of death may be obscure though preceded by a protracted period of ill-health. It sometimes happens that when asked for a death certificate in such a case the attending physician refuses to give one on the ground that he does not know the cause of death. In such instances the physician is shown that the law of the State requires him to make a guess, but usually before the case is closed a medical representative of the Health Department concurs in the guess. Every day, because of deaths without medical attendance or for other reasons, the medical staff of the department is called on to do its own guessing. Even in cases of sudden death the medical examiner will "decline jurisdiction" unless there be evidence of "violence," as above defined, and except in medical examiner's cases and certain hospital cases it is usually impracticable to obtain an autopsy merely to establish causes of death when evidently due to "natural causes."

Facts, conventions, blunders and guesses, assembled in the manner above indicated, furnish us with our means of deciding such matters of practical importance as the justification of public expenditures for the supposed promotion of a community's health.

Causes of death and the prevalence of diseases lend themselves most readily to the compilation of statistical misinformation, but even statistical deaths by age groups may not be so worthy of confidence as Raymond Pearl may imagine. As insurance has grown in popularity so has falsification of age in applications for policies, and the discreet undertaker now makes sure that the death certificate agrees with the insurance policy.

Statistics are continually giving rise to erroneous biometric conclusions. So also an accurate financial statement of the operations of a business corporation is equally capable of deceiving an investor who does not take the trouble to inform himself regarding the needs of that business for working capital or reserves. Neither mathematical nor economic theories can be made to work as substitutes for practical knowledge.

In some matters, even when the prevalence of certain diseases is concerned, conventional statistical data may be utilized to furnish trustworthy conclusions. With regard to other matters biometric statistics, although bearing the stamp of official approval, may be extremely misleading and because of the nature of the subject to which they relate will never be otherwise.

An intelligent use of biometric statistics calls for a clear understanding of the elusive character of much of the data on which

they are based, a familiarity in the manner of their compilation and sometimes even knowledge of the purpose which they may be intended to serve.

TO THE PHYSICIANS.

Every contagious disease is contagious before a positive diagnosis can be made. A person in the beginning stage of a contagious disease is likely to be dangerous to other persons anywhere from a day to a week before the onset of the contagious disease is even suspected. Scarlet fever is contagious a day or two before the rash appears; measles, two or three days, or longer. It is often three or four days before a dangerous case of diphtheria is recognized, and frequently a week or more before a case of whooping cough or smallpox or typhoid fever arouses suspicion. A physician is not likely to be called until positive and alarming symptoms have developed. A householder, as well as a physician, is required by law to notify the Health Department of the existence of a contagious disease in his house, but as this virtually assumes that the householder can recognize contagious diseases and may wait until they are recognizable before notifying, it is of little practical value.

Unless the physician reports immediately by telephone a case of contagious disease which he discovers, it may be at least a day later before a mail notice is received by the Health Department and its representative arrives on the ground. He may find that precautions for the protection of others have already been taken when he arrives, but even so, it will usually be found that the patient has exposed a considerable number of persons to infection, and so far as his immediate household is concerned, has, in most instances, done all the damage he is capable of doing when the Health Department officials arrive on the scene.

On the discovery of a case of a contagious disease a belated attempt to quarantine or isolate the case is made in view of the protection of others.

THE USE OF ICE IN THE HOUSEHOLD.

Ice should not be exposed to the summer air and will last longer if it is cold when put into the refrigerator, and therefore, will keep food colder. Ice should not be left lying around until it is warmed nearly to the melting point, as it will lose much of its value.

The refrigerator should be located in the coldest possible place and its doors should close tightly. Arrange so that your refrigerator will be opened for the shortest possible time when taking out or putting in food. Ice absorbs heat from the surrounding air and objects. Thus, when ice is allowed to absorb heat from the sur-

rounding air the ice is wasted and the temperature of the food is lowered sufficiently to prevent it from spoiling.

A wise precaution is to wrap the top of the piece of ice and the side opposite the refrigerator door with paper. This will tend to save the ice, as the paper will act as a nonconductor of heat and prevent the ice from absorbing the heat too rapidly when the refrigerator is opened. The plan should not be overworked, however. Only by absorbing heat from surrounding foodstuffs, and melting, can ice keep the temperature of the food low enough to check decomposition, and ice must melt with a certain degree of rapidity in order to prevent food from spoiling.

Do not put chopped ice into water or other drinks in warm weather. Very cold drinks are often dangerous. Water and other drinks should be cooled in bottles placed in the refrigerator. When made with hot water, the drinks should be allowed to cool off before they are put into the refrigerator.

UNLICENSED DOGS.

The following notice, which is self-explanatory, has been sent to all police captains in Boston by the Superintendent of Police by orders of the Police Commissioner of Boston:

I am directed by the Police Commissioner to notify division commanders to instruct all officers attached to their respective divisions, to take note of all dogs unlicensed up to and including April 1, 1927.

Division commanders will also instruct officers to prosecute all persons keeping unlicensed dogs on or after April 1, 1927.

The Health Commissioner of the City of Boston has called attention of the police to the fact that a number of children and adults are being bitten by unlicensed dogs and, as a general rule, the unlicensed dog has no permanent home and is not properly fed or taken care of, therefore he becomes a danger in spreading the disease of rabies.

This is a most important matter and this order will be read at the several roll calls, every day, until the end of this month. Instruct dog owners to make application immediately for dog licenses, to become effective April 1, 1927.

MICHAEL H. CROWLEY,
Superintendent of Police.

SALMON CONDEMNED.

The Food Division of this department has recently condemned a large lot of canned salmon to the extent of 50,000 cans which were found in a local warehouse in a decomposed and liquifying condition. This salmon is being dumped and disposed of under the supervision of the inspectors of the division.

PAROCHIAL SCHOOL CHILDREN EXAMINED, BOSTON, 1927.

	Total Number Weighed and Measured.	Number 10 Per Cent or More Under-weight.	Per Cent Under-weight.
BOSTON PROPER:			
* Cathedral	378	48	12.6
ROXBURY:			
St. Patrick	740	60	8.1
St. Joseph	480	38	7.9
St. John	491	78	15.8
Holy Trinity	242	21	8.6
St. Francis de Sales	533	51	9.5
DORCHESTER:			
St. Mathew	89	2	2.2
JAMAICA PLAIN:			
St. Thomas	712	175	24.5
Cheverus	1,250	454	36.3
ROSLINDALE:			
St. Francis Xavier	360	64	17.7
HYDE PARK:			
St. Raphael	770	117	15.1
St. Catherine	141	30	22.2
READVILLE:			
St. Anne	405	44	10.8
	6,591	1,182	17.9

* Cathedral School, children weighed in both 1926 and 1927.

There were seven parochial schools in which the children were not examined.

1927 — Thirteen schools, children weighed and measured, 6,591; children 17.9 per cent underweight.

1926 — Twenty-five schools, children weighed and measured, 14,657; children 18.4 per cent underweight.

Total, 1926–27 — Thirty-eight schools, children weighed and measured, 21,248; children 18.2 per cent underweight.

Total number 10 per cent or more underweight: 2,701 in 1926; 1,182 in 1927; 1926 and 1927 total, 3,883.

	Active Pulmonary Tuberculosis.	Latent Pulmonary Tuberculosis.	Hilum Tuberculosis.	Latent Hilum Tuber-culosis.	Suspects.	Mal-nutrition.	Heart Disease.
1926	1	1	24	6	90	278	55
1927	—	—	5	1	28	*	18
Totals	1	1	29	7	118	.....	73

* This report has not yet been received.

1927 — Number of children re-examined, 78.

SURVEY OF THE QUALITY OF BOSTON MARKET MILK.

The following is the result of a survey made of market milk sold in Boston by dealers and chain stores during April, 1927. In Massachusetts the statute law requires a minimum of 12 per cent solids and 3.35 per cent butter fat.

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Alden Brothers	12.56	3.90	31
Allen, Fred H	12.45	3.91	23
Antetomasso, Peter	12.56	4.02	13
Barron, C. W	13.90	4.85	16
Bergmann, J. H	12.63	3.95	115
Bolio, William	12.80	4.12	493
Brandley, F. J. & P. J	12.20	3.77	14
Casey, James	12.29	3.83	26
Cashin, James	12.41	3.86	21
Cedar Hill	13.64	4.63	19
Chapin, George	12.60	3.90	14
Childs Brothers	12.72	3.98	64
Clapp, Frank L	12.50	3.45	16
Clark, Levi	12.23	3.75	27
Converse, M. M	12.64	3.80	14
Corkery, J. J	12.28	3.77	425
Cosgrove, Martin S	12.89	3.93	53
Cummings, F. S	12.23	3.73	15
Cunningham, Paul	12.55	3.80	19
Cusick, W. H	12.85	3.98	15
Dean, Louis W	12.89	4.10	42
Deerfoot Farm	12.75	4.08	13
Denehy, Timothy	13.09	4.35	33
Driscoll, William B., Company	12.61	3.89	16
Duggan Brothers	12.82	3.85	27
Edgerly, Frank S	12.22	3.72	269
Elm Spring Farm Company	12.66	4.05	18
Ferguson, M. D	12.45	3.83	26
Furbush, A. J	13.16	4.08	22
Gallagher, Thomas	11.63	3.38	21
Garfield, Mason	14.55	5.20	15
Garvin, C. E	15.13	5.85	18
Giroux, J. E. & H. J	12.41	3.83	17
Griffin, Joseph L	12.38	3.89	21

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Gushee, C. W.	12.77	3.91	426
Herlihy Brothers	12.41	3.75	21
Hickey, M. J.	12.57	3.90	21
Holden, John E.	12.54	3.96	29
Hood, H. P.. & Son	12.29	3.81	42
Hutchinson, F. T.	12.26	3.65	49
Jones, William T., Company	12.62	3.93	22
Kendall Brothers	12.35	3.77	21
Kingston, Samuel	13.12	4.22	104
Knapp, George J.	12.59	3.85	65
Lang Brothers	12.36	3.78	21
Larson, Charles	12.29	3.75	21
Lincoln Farms	12.80	4.15	31
Lyndonville Creamery	12.82	4.07	13
Manning, Peter	12.20	3.53	37
Maple Farm Milk Company	12.27	3.71	288
McAdams, J. F.	12.75	3.93	19
McKernan, James	12.68	4.07	18
Millwood Farms	12.42	3.87	8
Munchback, George	12.33	3.78	22
Newton & Pope	12.71	3.97	21
Noble, William F., & Co.	12.59	3.85	20
Robinson, A. J.	12.54	3.87	28
Schuster, Adam	12.47	3.85	18
Seven Oaks	12.38	3.78	18
Shick, Jacob	12.58	3.77	551
Somerset Farms	13.37	4.53	10
Sterling Farms Milk	12.71	3.77	18
Stone, H. L.	12.46	3.95	17
Stuart, W. E.	12.59	3.95	16
Swett, Warren	12.30	3.78	420
Turner Center System	12.48	3.83	17
United Farmers Co-operative Creamery Company	12.66	4.00	19
Vartanian, S.	12.11	3.65	15
Vartanian, K.	12.87	4.15	13
Walker-Gordon	12.65	4.15	13
Weiler, E., & Sons	12.41	3.78	24
Werner Company	12.27	3.70	53
Westwood Farms	12.48	3.78	20

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
White Brothers	12.72	4.03	14
Whiting Milk Company	12.39	3.81	24
Whittemore, W. D	12.87	3.90	16
Wiswall, George A	13.01	4.40	27
Woodland, Charles L	12.82	4.45	23

CHAIN STORE MILK.

Name of Dealer.	Supplied By.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
		Per Cent.	Per Cent.	
The Great Atlantic & Pacific Tea Company.	Hood & Sons Company	12.30	3.75	61
The Cloverdale Company	Turner Center System, Inc.	12.57	3.87	54
John T. Connor Company	Bellows Falls Co-operative Creamery Company.	12.79	4.07	21
Economy Grocery Stores	Whiting Milk Companies	12.33	3.77	159
The Ginter Company	United Farmers'	12.67	4.00	19
Morgan Brothers Company	Morgan Brothers	12.69	3.97	30
O'Keeffe's, Inc	Bellows Falls Co-operative Creamery Company.	12.95	4.25	22
Winer, M	Hyman Winer	13.02	4.13	35

CHANGE IN TUBERCULOSIS PROGRAM IN BOSTON.

Several surveys recently carried on in Boston in relation to the tuberculosis situation have all been unanimous in recommending that the responsibility for the tuberculosis work, together with the machinery for carrying it on, be transferred to the Health Department. It was also recommended that the sanatorium at Mattapan be placed under the direction of the Boston City Hospital Trustees, and in March, 1927, a city ordinance was passed which did transfer the functions of the trustees of the Boston Sanatorium, to these two other city departments — the Health Department, and the Boston City Hospital. This ordinance became effective April 1.

The need of decentralizing the tuberculosis clinics has been recognized for some time, and with the transfer of this work to the Health Department the various health units in the city have been utilized for this purpose. Clinics have been established at the health units at 17 Blossom street, 41 North Margin street, and East

Boston. The clinics at 57 East Concord street are being continued as usual. This step is an important one since it makes available in local districts opportunity not only for the examination and treatment of positive tuberculosis cases, but also examination and advice for that most important group, tuberculosis contacts, for whom an active preventive program is being planned.

The examining physicians for the tuberculosis clinic work have been appointed on the recommendation of the three medical schools in Boston. This is the same plan as has been in operation for some time in the pediatric service of the Child Hygiene Division. There is also to be created a Division of Tuberculosis, with a director in charge.

DR. WILINSKY ON MANDATE COMMISSION.

Dr. Charles F. Wilinsky, Deputy Commissioner of Health, left Boston May 12 for New York, from where he will sail for Palestine to assist Prof. Milton J. Roseneau of Harvard in a survey and health study of that country. Doctor Wilinsky was selected by the international commission in charge of the project to assist in the work, and has been granted a leave by the city to do it. Doctor Wilinsky has been in charge of the health unit work of the city since its start in 1916, and his appointment is in recognition of his work in disease prevention.

SUMMARY OF THE WORK, APRIL, 1927.

BUREAU OF ADMINISTRATION.

Prosecutions ordered	5	Resignations	2
Legal notices	333	Retirement	1
Forcible removals	2	Appointment, provisional, temporary	1
Order issued	1	Provisional employment terminated	1
Proposals accepted	2	Permanent appointment	1
Change in ordinance	1		
Personnel:			
Death of employee	1		

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	1,253	Hen licenses	375
Day nurseries	2	Manicure-massage	15
Denatured alcohol	151	Milk	2,830
Dump discontinued	1	Offensive trades	6
Dumps refused	2	Pedlers	119
Garbage	3	Manure	2
Grease	28	Stable permits revoked	2

MEDICAL DIVISION.

Visits:		Cases brought to Boston for treatment	161
By medical inspectors	1,576	Deaths investigated	9
By veterinarian	269		
By investigator	343		

NURSING SERVICE.

Homes Visited		18,879
Child Hygiene: *		
New cases visited	1,536	
Old cases revisited	7,945	
Total child hygiene visits		9,481
Communicable Diseases: †		
New cases visited	2,152	
Old cases revisited	11,686	
Total communicable disease visits		1,3838
Miscellaneous Visits:		
Infant death investigations		63
Maternal death investigations		9
Patients accompanied to hospital		8
Visits to day nurseries		23
Visits to parochial schools		3
Posture classes		58
Nutrition visits		3
Other special visits		41
Total number of all visits		23,527
Number hours spent in station by nurses		2,486
Number hours spent in conference by nurses		‡1,506
Number hours spent in nurses meetings		163
Number hours spent in other conference (tuberculosis)		‡268

HEALTH UNITS.

Miscellaneous Unit Activities:	
Complaint of insanitary conditions	46
Number of persons given health and other information	810
City visitors	291
Out of city visitors	12
Routine medical examination of adults (evening service)	4
Dental Service:	
Number of children's teeth cleaned	246
Number of children examined	1,553
Prophylaxis	3,774

* Includes 153 wrong addresses; 1,078 not seen; 1,231 absent visits.

† Includes 207 ophthalmia visits; also tuberculosis visits and absent visits. 4,461 tuberculosis visits; 1,598 tuberculosis contact visits; 115 tuberculosis suspect visits. Total, 6,174. 80 wrong addresses; 923 not seen; 1,003 absent visits.

‡ This includes child health conferences, vaccination and diphtheria immunizations at stations and tuberculosis clinics.

Eye Service:	
New cases	18
Number of refractions	25
Number of glasses prescribed	9
Number examined for diagnosis	22
Medical Division of Health Department: *	
Vaccinations performed by medical inspector	50
Number of vaccination certificates issued	21
Antitoxin, antityphoid and toxin-antitoxin administered	34
Number of children examined for day nurseries	26
Nurses' visits:†	
Communicable disease visits by nurses in district	1,500
Child Hygiene Division of Health Department: ‡	
Number of child health conferences	23
Total attendance at child health conferences	1,107
New babies at conferences	147
Infant deaths investigation visits	7
Number of posture classes	23
Attendance at posture classes	645
Tuberculosis Clinics:	
Number day and evening clinics	15
Attendance at clinics	211
New cases	7
Boston Lying-in Hospital:	
Pre-natal Clinic:	
Number of clinics	8
Attendance	118
Community Health Association:	
General Division:	
Home visits by nurses	6,016
Boston Dispensary:	
Calls by district physician	43
State Department of Mental Diseases:	
Number of clinics	9
Attendance at clinics	51
Visits of workers	70
New cases	4
American Red Cross, number of classes	4
Attendance at classes	36

MONTHLY REPORT OF VENEREAL DISEASE ACTIVITIES, APRIL, 1927.

SYPHILIS.

Current cases under investigation April 1	11
New cases	12
Total	23

* Included in "Medical Division" report.

† Included in "Medical Division" and "Nursing Service" report.

‡ Included in "Child Hygiene Division Report" and "Nursing Service."

Disposition of Cases.

Unable to locate	2
Under treatment	7
False address	5
Under investigation May 1	9
Total	23
New cases reported by number	73

GONORRHEA.

Current cases under investigation April 1	18
New cases	41
Total	59

Disposition of Cases.

Unable to locate	18
False address	12
Under treatment	16
Under investigation May 1	13
Total	59
New cases reported by number	206

SUMMARY.

Current cases under investigation April 1	29
New cases during April	53
Total	82

Disposition of Cases.

Unable to locate	20
False address	17
Under treatment	23
Under investigation	22
Total	82
Number of visits of venereal investigator	343

VENEREAL COMPLAINTS AND SOURCES OF INFECTION, AND VENEREAL DEATHS.

New cases reported	11

Disposition of Cases.

Under treatment	3
Unable to locate	7
No evidence of disease	1
Total	11
Venereal deaths investigated	2

CHILD HYGIENE DIVISION.

REPORT OF TOXIN-ANTITOXIN ADMINISTRATION AND VACCINATIONS AT CHILD HEALTH CONFERENCES DURING APRIL, 1927.

Station.	Toxin-Antitoxin.			Vaccinations.
	First.	Second.	Third.	
Old Town Hall, Brighton	6	5	4	6
31 Lincoln street, Allston	4	5	5	1
Charlestown Municipal Building	2	2	2	12
Codman Square, Dorchester	6	2	4	3
Columbia Road Municipal Building	—	—	3	13
7 Gordon place, Dorchester	—	—	—	3
East Boston Health Unit	2	—	—	3
Hyde Park Municipal Building	1	—	—	3
Curtis Hall, Jamaica Plain	1	—	2	3
41 North Margin street	20	14	11	4
Roslindale Municipal Building	1	1	1	7
Beth Israel Hospital	—	—	—	—
Children's Hospital	—	—	—	3
1049 Columbus avenue	5	1	1	19
Vine Street Municipal Building	2	7	2	12
140 Dorchester street	—	1	3	13
70 Emerald street	—	1	—	—
Shawmut Avenue Municipal Building	1	1	—	7
122 Tyler street	10	11	12	1
17 Blossom street	6	5	1	—
Totals	67	56	51	113
Totals, all stations	.....	.....	174	

MONTHLY REPORT OF CHILD HEALTH CONFERENCES APRIL, 1927.

Station.	Number of Babies.	Number of Pre-school.	Total Attendance.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	203	12	215	33	11	44	4	54
31 Lincoln street, Brighton	65	14	79	9	3	12	4	20
Charlestown Municipal Building	233	20	253	32	5	37	7	36
Codman square, Dorchester	420	25	445	65	5	70	8	56
Columbia Road Municipal Building	526	5	531	64	—	64	8	66
7 Gordon place, Dorchester	200	11	211	23	1	24	3	70
East Boston Health Unit	365	52	417	56	7	63	8	52
Hyde Park Municipal Building	168	13	181	30	4	34	4	45
Curtis Hall, Jamaica Plain	214	26	240	32	3	35	4	60
41 North Margin street	199	107	306	38	8	46	7	44
Roslindale Municipal Building	242	16	258	42	1	43	4	65
Beth Israel Hospital	135	7	142	21	4	25	4	36
Children's Hospital	99	8	107	16	1	17	3	36
1049 Columbus avenue	317	34	351	48	8	56	7	50
Vine Street Municipal Building	300	7	307	55	1	56	4	77
140 Dorchester street	329	87	416	76	44	120	7	40
70 Emerald street	103	34	137	17	8	25	4	34
Shawmut Avenue Municipal Building,	169	11	180	27	6	33	3	60
122 Tyler street	123	46	169	7	1	8	3	56
17 Blossom street	355	61	416	44	8	52	8	54
Totals	4,765	596	5,361	735	129	864	104	51

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

Stores inspected	4,774
Sanitary defects remedied	231
Complaints at office	53
Referred to Sanitary Division	25
Milk applicants	114
Notices to abate nuisances	163
Court cases	2
Convictions	1
Fines	0
Continued	1
Applications for pedlers' licenses approved	120
Vehicles inspected and approved	594
Laboratory Examinations:	
Bacteriological	2
Chemical	2

CONDEMNATIONS.

Meats:		Haddock	15 pounds
Beef	797 pounds	Miscellaneous fish	75 pounds
Bologna	½ pound	Shad	15 pounds
Chicken	13¼ pounds	Vegetables:	
Frankfurts	31 pounds	Prunes	50 cases
Ham	3 pounds	Tangerines	20 crates
Liver	440 pounds	Asparagus	96 bunches
Liver	6 pounds	Butter beans	650 pounds
Lamb	139 pounds	Dandelions	30 bushels
Pork	12 pounds	Onions	1,500 pounds
Poultry	783 pounds	Onions	51 crates
Turkey	83 pounds	Peas	200 pounds
Veal	1,351 pounds	Tomatoes	1,100 pounds
Rinds	200 pounds	Peas	37 baskets
Plucks	4	Miscellaneous:	
Sweetbreads	15	Bread	10 pounds
Kidneys	50 pounds	Rice	50 pounds
Fish:		Salt	470 pounds
Anchovies	91 cans	Orange juice	1 barrel
Butterfish	100 pounds		

LIVE STOCK INSPECTION (Brighton Abattoir).

Cattle inspected	2,505	Parts condemned (lbs.)	22,730
Calves inspected	6,816	Animals condemned	172
Swine inspected	4,005		

DAIRY DIVISION.

Total inspection	1,191	Total cattle inspected	9,794
Dairies inspected	601	Inspections of milk plants and licensed dealers	230
Scoring above 50 *	359	Bacteriological examinations	160
Scoring below	242	Country creamery inspections	18
With milk rooms	343	Sediment tests	139
Without milk rooms	258		
Inactive	31		

* Passable mark.

BUREAU OF MILK INSPECTION.

SAMPLES EXAMINED.

CHEMICAL:	
Milk from wagons	240
Milk from stores	567
Milk brought by citizens	12
Vinegar	36
Cheese	3
Ice cream	7
Soft drinks	2
Sausage pickle	1
Water	3
Liquors	2
Salad dressing	1
Drainpipe solvent	2
BACTERIOLOGICAL:	
Milk	570
Ice cream	73
Court cases	6
Fines	$85

SANITARY INSPECTION.

Original inspections	3,338	Legal notices served	378
New reports	3,123	Complaints investigated	756
Reinspections	9,749	Court cases authorized	4

BACTERIOLOGICAL LABORATORY.

Diphtheria	1,105
Tuberculosis	361
Typhoid	61
Gonorrhea	788
Gonorrheal ophthalmia	63
Syphilis	1,376
Other examinations *	76
Bacteriological examinations of milk	570
Bacteriological examinations of ice cream	73
Swimming pools examined	64
Water from schools	21
Other samples of water	31

* Malaria, 6; feces for typhoid, 20; urine for typhoid, 20; genito-urinary examinations, 15; rabies, 4; smears for organisms, 3; paratyphoids, 4; chicken for poison, 1; water for bacteria, 1; smear for Vincent's angina, 1; sheep pluck for parasites, 1.

UNWHOLESOME OLIVES CONDEMNED.

Large quantities of unwholesome olives have been discovered recently by the inspectors of the Food Division in routine examination made in the North End section of the city. Upon examination the olives were found to run from 15 to 40 per cent wormy, and came from Sicily in 300 barrel lots. Such olives as have been found to be unfit for food have been condemned and thus far 1,200 pounds have been disposed of in this way by the inspector.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING APRIL, 1927.

Classification.	Number.	Percentage.
After death	—	—
Seven days or less	2	3.77
Eight to fourteen days, inclusive	3	5.66
Fifteen to twenty-one days, inclusive	2	3.77
Twenty-two to thirty-one days, inclusive	1	1.89
Within First Month. (Total)	8	15.09
Within second month	7	13.21
Within third month	4	7.55
Within fourth month	6	11.32
Within fifth month	3	5.66
Within sixth month	2	3.77
Within seventh month	—	—
Within eighth month	2	3.77
Within ninth month	—	—
Within tenth month	—	—
Within eleventh month	1	1.89
Within twelfth month	2	3.77
Within First Year Preceding Death. (Total)	35	66.03
Within second year	4	7.55
Within third year	4	7.55
More than three years	10	18.87
Grand totals	53	100.00

NEW HEALTH UNIT.

Another new George Robert White Health Unit will be dedicated in June in South Boston, near the Carney Hospital. This will be the third of the George Robert White Units, and a total of five in the chain of units that are being operated by the Health Department. Mr. George H. Phelan, manager of the George Robert White Fund, will preside at the exercises, and Dr. Haven Emerson of Columbia University will make the dedicatory address. Other speakers will be State Commissioner of Public Health Dr. George H. Bigelow, Mayor Malcolm E. Nichols, Health Commissioner Dr. Francis X. Mahoney, and representatives of the Boston Real Estate Exchange, the Boston Chamber of Commerce, and the Boston Bar Association.

VITAL STATISTICS, APRIL, 1927.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING APRIL, 1927, WITH COMPARATIVE FIGURES FOR APRIL, 1926.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
All Causes:						
Total deaths	1,003	1,198	—195	15.18	18.26	—3.08
Nonresidents deducted	804	970	—166	12.17	14.79	—2.62
By Age:						
Under one year	119	152	—33	1.80	2.32	—.52
One year to four years, inclusive	51	69	—18	.77	1.05	—.28
Sixty years and over	415	491	—76	6.28	7.48	—1.20
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	52	52	—	.79	.79	—
Arteriosclerosis	18	24	—6	.27	.36	—.09
Heart disease	180	243	—63	2.72	3.70	—.98
Nephritis, chronic	64	52	+12	.97	.79	+.18
Infant and Maternal Mortality:						
a. Total registered live births	1 266	1,450	—184	19.16	22.10	—2.94
b. Registered stillbirths	47	53	—6	.71	.81	—.10
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	35.79	35.26	+.53
c. Deaths of mothers from causes incident to childbirth	13	18	—6	.20	.27	—.07
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	9.90	11.98	—2.08
Deaths of children in first year of life	119	152	—33	1.80	2.32	—.52
Deaths in first year per 1,000 live births,	.....	.....	.....	94.00	104.83	10.83
Violence:						
Accidents	52	45	+7	.79	.69	+.10
Homicides	3	3	—	.04	.04	—
Suicides	6	6	—	.09	.09	—
Miscellaneous:						
Alcoholism, acute or chronic	13	19	—6	.20	.29	—.10
Broncho-pneumonia	68	94	—26	1.03	1.43	—.40
Cancer	119	113	+6	1.80	1.72	+.08
Cirrhosis of the liver	5	7	—2	.07	.11	—.04
Diabetes mellitus	20	23	—3	.30	.35	—.05
Diarrheal diseases, children under two years of age	9	13	—4	.14	.20	—.06

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	1	2	—1	.015	.03	—.015
Deaths.	—	—	—	—	—	—
Cerebrospinal meningitis.....Cases..	9	2	+7	.14	03	+.11
Deaths.	7	1	+6	.10	.015	+.085
Diphtheria.....Cases..	122	70	+52	1.85	1.07	+.78
Deaths	8	8	—	.12	.12	—
Influenza.....Cases..	36	85	—49	.54	1.29	—.75
Deaths.	3	23	—20	.04	.35	—.31
Measles.....Cases..	372	788	—416	5.63	12.01	—6.38
Deaths.	2	9	—7	.03	.14	—.11
Pneumonia (lobar).....Cases..	153	241	—88	2.31	3.67	—1.36
Deaths.	59	87	—28	.89	1.33	—.44
Scarlet fever.....Cases..	484	329	+155	7.32	5.01	+2.31
Deaths.	4	4	—	.06	.06	—
Tuberculosis (pulmonary).....Cases..	136	190	—54	2.06	2.90	—.84
Deaths.	53	74	—22	.80	1.13	—.33
Tuberculosis (other forms).....Cases..	18	36	—18	.27	.55	—.28
Deaths.	9	10	—1	.14	.15	—.01
Typhoid fever.....Cases..	2	4	—2	.03	.06	—.03
Deaths.	1	1	—	.051	.015	—
Whooping cough.....Cases..	80	360	—280	1.21	5.49	—4.28
Deaths.	5	18	—13	.07	.27	—.20

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1927 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

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MONTHLY BULLETIN
HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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ONE PHASE OF BOSTON'S INFANT MORTALITY.

As was pointed out in the "Bulletin" of June, 1925, Boston's infant mortality rate has reached a point where our local infant mortality problem has become chiefly that of producing normal human offspring, inherently capable of living. This is indicated by the fact alone that practically one half our infant mortality occurs within a month of birth. Many infants also who manage with care to survive one month succumb a little later from some inherent defectiveness which renders them unable to meet the ordinary stresses of earthly existence which a normal infant is designed to withstand.

Congenital inability to live often fails to be shown in the death certificate. When a defective infant succumbs to any acute infective process that is likely to appear as a sole and sufficient cause of death, whereas the same exposure would not have produced recognizable results in a normal infant or if so would not have caused death.

Evidence of incapacity properly to assimilate food will appear sooner or later in the doomed defective infant and as a result death is often credited in the death certificate and in vital statistics to diarrhea and enteritis.

While the major problem is as just stated there is also to be found evidence that the possibility of common acute infections constitutes a real danger even to normal infants and that the problem of the prevention of fatalities from this cause alone still confronts us.

The figures given in the table below may not state accurately the number of deaths properly to be ascribed to the causes specified, but the fluctuations in these figures from year to year are sufficiently wide to indicate that conditions predisposing to fatal infections in infants vary notably and to suggest that to some extent at least the prevention of such fatal infections may be practicable.

To take for example the deaths in the table ascribed to bronchitis, capillary bronchitis, broncho pneumonia and lobar pneumonia, the large number for 1918 is undoubtedly a reflection of the influenza epidemic which occurred that year. Likewise, the fluctuations in infant mortality from these causes in the other years correspond to similar fluctuations in adult mortality from acute respiratory infections.

The danger from infections of this sort is of course always increased by the bringing of people together from diverse sources and crowding them, as on ships or in barracks.

Such immunity as may have been acquired from exposure to the types of infection to which a person may have been exposed in his accustomed environment tends to lose its practical value when people from diverse environments are brought together. By crowding, opportunities for the spread of infections are increased. By the passage of infective agents through susceptible people, the virulence of such organisms tends to increase. But with immobile population, such as is to be found in Boston, the fluctuation in fatalities from acute respiratory infection is probably due chiefly to some climatic conditions which may favor the development and spread of some kind or kinds of infective organisms in the population, in somewhat similar manner as local weather conditions may favor one garden crop or another. This hypothesis further receives support from the marked difference in frequency in different years with which throat swabs and cultures sent into the laboratory will be found to contain one kind of an organism or another besides that for the determination of whose presence the swab culture was taken. But whatever may be the prevalent type of organisms capable of causing dangerous respiratory infections at any place, at any time, these organisms are spread about by persons who are going about and are apparently well. It must be regarded as reasonably well established that a person who is going to develop influenza or even a "cold" is highly infectious to others before recognizable symptoms appear. For this reason, the protection of

infants against respiratory infections which may be prevalent in a community would appear to call for the avoidance of exposure to adults, not only to the sick but those apparently well.

Climatic and weather conditions are probably also the chief factors in favoring the growth and spread of organisms which make the infant mortality from gastrointestinal infections vary as widely as it does from year to year. A process of exclusion seems to justify this conclusion. A direct connection between the local meteorological record and an infant mortality from gastrointestinal infections is however most difficult to show with any degree of plausibility.

CARE OF INFANTS IN SUMMER.

During the summer months more attention must be given to the care of the infant at home since during the hot weather an increase in the number of unnecessary and avoidable deaths occur.

Diarrheal diseases, and other disorders peculiar to warm weather, are the leading causes of deaths of infants during the hot summer months. Infants and young children are done much harm by perishable foods on account of the decomposition and bacterial growth which occurs in such foods under summer temperature conditions. Of course this is particularly true of cow's milk.

At this time, especially, overeating or over-feeding by infants should be prevented. Breast milk is the best at all times. It is the safest, cheapest and best of all infant foods.

Breast feeding and low infant mortality always go hand in hand. The hot weather always brings with it bowel trouble in bottle-fed babies.

If the mother is unable to nurse her baby she should consult her physician before feeding baby on the bottle. Nursing and not weaning is the proper thing in hot weather.

The amount of food may well be diminished and milk should be diluted only with water that has been boiled. If cow's milk must be used see that it is clean, pasteurized milk that has been prepared according to your physician's directions.

The baby should have plenty of fresh air, preferably the open air, and on the shady side of the street. Keep flies and mosquitoes away from it. If unable to get out into the street, the porch is the next best place. See that the baby does not become overheated.

But very little clothing is needed on the baby during the hot weather. A cotton undershirt will serve as a covering. Have the arms and legs uncovered and free. Let the baby lie on a clean, firm surface and not on a pillow or a heap of clothes.

Bathe the baby every day, besides giving it a couple of sponge baths with cool water to which has been added baking soda. For drinking water plenty of cool, boiled water is the best. Ice water should never be given the baby.

TO PHYSICIANS.

We wish to call to the attention of the physicians of the city the fact that the bacteriological laboratory of the department is always at their service and is prepared to handle any problems that may come up in the realm of contagious and infectious diseases. This service is free to physicians and residents of the City of Boston.

At the present time 50,000 examinations are being made yearly. This number includes routine examinations for diphtheria, Neisser infection, tuberculosis (pulmonary and genitourinary), typhoid (blood, feces and urine), syphilis (Wassermann and dark field), milk, ice cream, etc. Under miscellaneous examinations are included foods, shell fish, swimming pools, baths, etc.

The laboratory staff is available to consult with at all times and will co-operate with the physicians in any problem that concerns contagion or infection. For any work that is not handled in the laboratory, advice will be given as to where the examination can be made by reliable persons.

THE EXANTHEM IN THE GROUP CALLED EXANTHEMATA.

For the purposes of this brief article, the diseases included in the group are: Scarlet fever, measles, German measles, smallpox and chicken pox.

There is no intention to attempt anything in the way of differential diagnosis or to point out exhaustively the many and varied exceptional forms assumed, from time to time, by the eruptions of these diseases. It is desired rather to call attention to the similarities these eruptions show both in character and in course of development.

These diseases all present periods of incubation, invasion (prodromal), eruption and desquamation. The desquamative stage is the termination of the period of eruption.

The exanthem, in every case, shows first as an erythema or hyperaemia. This erythema ultimately becomes general in its distribution, but each disease has its selective area for first appearance. Measles, German measles and smallpox usually show first on the face; chicken pox and scarlet fever on the trunk. With all of

them, the erythema spreads rapidly. The initial erythema may be macular or diffuse from onset; when macular, it may rapidly become diffuse, or it may remain macular throughout its course. The coalescence of macules into diffuse areas may be general or in variously sized patches. The erythema varies in intensity and in duration in the different diseases and in different cases of the same disease.

It is, pathologically, the initial or congestive period of an exudative inflammation. In mumps, an infectious disease without an exanthem, the inflammation in most cases stops at the stage of congestion. Among the exanthemata, the exudate is invariably present in chicken pox and in smallpox; usually present in scarlet fever; sometimes in measles; rarely in German measles. I use the word exudate here as meaning enough exudate to be appreciable to the eye and finger. The initial exudate in smallpox is purulent, in all the others it is serous. In scarlet fever we have miliary, punctate vesicles; in measles and German measles, the vesicles, when present, are larger or smaller according to the size of the macules which go on to the exudative stage. In scarlet fever, measles and German measles, the exudate is entirely absorbed. There is no scab formation. In smallpox and chicken pox the absorption is only partial. There is always scab formation.

As already stated, desquamation is the final stage of the eruption. In smallpox and chicken pox there are scabs and crusts with more or less peeling of skin about the lesions. In smallpox we know that these scabs and crusts are infective. In chicken pox we do not know whether they are or not. Chicken pox is not inoculable. Cases of both of these diseases, however, are isolated until all scabs and crusts are off. It is of no avail to pick off the scabs before they are dry and ready to come off. Such procedure is followed by the formation of secondary scabs and the date of release is retarded. The duration of quarantine in connection with chicken pox is modified to suit the mildness of the affection. The peeling skin about the sites of the lesion in these diseases is not held to be infective.

Any congestion of the skin causes an increase in the proliferation of epithelial cells. This is followed by an increase in the amount of deciduous epithelium in the form of a furfuraceous or branny scurf, like dandruff. The desquamation of measles and of German measles is usually of this character and no attention is paid to it now in connection with quarantine regulations. Usually in scarlet fever, and we must remember sometimes in measles and German measles, there is sufficient exudate to separate the outer layers of epithelial in patches or sheets of varying size and thickness. This is most noticeable on palms and soles. The desquamation here is coarse and much more conspicuous. There is no reason for considering this coarse

desquamation infective. It is not so considered in smallpox, cases of which are discharged wholly irrespective of the amount of loose desquamating skin between the sites of the actual lesions. There still exists, however, a certain amount of prejudice against the release from isolation of desquamating scarlet fever patients.

I want to say a word about the diagnostic value of desquamation. In smallpox and chicken pox it is of great value. The character of the desiccating lesions, together with their distribution, makes a diagnosis as practicable late as early. With scarlet fever, measles and German measles, the situation is entirely different. Remembering that there may be little or no exudate in a scarlet fever exanthem and that there may be an unusual amount of exudate in either measles or German measles, producing a coarse desquamation, it is evident that the desquamation here must be considered indeterminate. We must have corroboration of complications, of history of exposure, or better, of onset, including duration of symptoms. A differential diagnosis between these diseases, based on desquamation alone, is a delicate, difficult and dangerous procedure.

It must be borne in mind that any inflammation of the skin, or prolonged congestion, due to whatever cause, is followed by some form of desquamation.—*Dr. William L. Somerset in the "Weekly Bulletin" of the New York Health Department.*

A HERO AND A MARTYR.

Probably his name is strange to you — Dr. Abraham Zingher. Very likely his profession means little to you — research bacteriologist. It may be that even his special quest will have small significance to you— he was studying immunization from communicable diseases.

But he has fairly earned the halo of the martyr for his devotion to that quest and his name will rank high on the scroll of fame for the work he did. A few mornings ago he was found dead in his laboratory, a notebook before him in which he was recording the results of a study of some antitoxin. He had been asphyxiated by an accident which somehow disconnected the tube that fed gas to his Bunsen burner.

He gave his life for the children of the world. He had ascertained many precious facts as to the immunization of children from such diseases as diphtheria, scarlet fever and measles. At the time of his death he was striving to ascertain methods for the perfection of the Dick treatment for possible permanent immunization against scarlet fever.

No frenzied multitudes come together to cheer such workers as

Doctor Zingher. Theirs is not the kind of labor which the galleries applaud. Yet what does not the world owe to these men who in the quiet secrecy of the laboratory pursue unremittingly their quest of knowledge for the safety and the happiness of humanity?

— *Boston Herald, June 8.*

INFANT MORTALITY IN BOSTON ASCRIBED TO ACUTE RESPIRATORY INFECTIONS AND TO "DIARRHEA AND ENTERITIS" FROM 1918 TO 1926, INCLUSIVE.

Year.	Total Births.	Deaths Under One Year.	Infant Mortality Rate.	Deaths Ascribed to Bronchitis, Capillary Bronchitis and Lobar Pneumonia.	Deaths Ascribed to Diarrhea and Enteritis.
1918	20,063	2,298	114.54	437	358
1919	18,781	1,818	96.80	267	302
1920	19,494	1,966	100.80	371	313
1921	19,397	1,499	77.27	234	180
1922	18,552	1,720	92.71	340	191
1923	10,020	1,569	82.50	320	128
1924	19,776	1,472	74.40	253	149
1925	18,596	1,582	85.07	294	138
1926	18,640	1,575	84.49	269	213

AUTOMOBILE OPERATORS' LICENSES.

Dr. Louis I. Harris, Health Commissioner of New York, makes the following recommendation with the view to lessening the present mortality from automobile accidents:

"The licensing of persons who run cars would seem to require a radical change. Not only should their physical fitness with respect to vision be determined, but there should also be a more careful medical examination to determine the applicant's powers of co-ordination, nervous reactions in emergencies, and, especially, to eliminate those who by appropriate mental tests could be shown to lack a sense of responsibility. Efforts should be made to discover whether applicants for licenses are drug addicts or have criminal records.

"Many persons drive cars who have not the nervous and temperamental stability that should be required of those who drive high-powered engines that may endanger life. The method of licensing automobile operators should be very drastically revised to include all such tests as may determine the mental and moral, as well as the physical fitness of individuals to drive cars."

SURVEY OF THE QUALITY OF BOSTON MARKET MILK.

The following is the result of a survey made of market milk sold in Boston by dealers and chain stores during May, 1927. In Massachusetts the statute law requires a minimum of 12 per cent solids and 3.35 per cent butter fat.

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Alden Brothers	12.82	4.16	30
Allen, Fred H.	12.52	3.80	30
Antetomasso, Peter	12.74	4.20	20
Barron, C. W.	14.62	5.55	10
Bergmann, J. H.	12.55	3.95	26
Bolio, William	12.41	3.75	32
Brandley, F. J. & P. J.	12.22	3.75	46
Casey, James	13.17	4.27	34
Cashin, James	12.60	3.87	27
Cedar Hill	13.20	4.38	13
Chapin, George	12.52	3.88	22
Childs Brothers	12.60	3.95	26
Clapp, Frank L.	12.12	3.40	36
Clark, Levi	12.15	3.72	22
Converse, M. M.	12.29	3.83	14
Corkery, J. J.	12.36	3.85	90
Cosgrove, Martin S.	12.84	3.95	42
Cummings, F. S.	12.15	3.66	21
Cunningham, Paul	12.68	4.08	13
Cusick, W. H.	12.90	4.00	58
Dean, Louis W	13.00	4.23	100
Deerfoot Farm	12.81	4.13	16
Denehy, Timothy	12.17	3.70	18
Driscoll, William B., Company	12.55	3.90	18
Duggan Brothers	12.66	3.85	15
Edgerly, Frank S.	12.42	3.90	20
Elm Spring Farm Company	12.39	3.83	33
Ferguson, M. D.	12.55	3.88	52
Furbush, A. J.	14.05	4.67	21
Gallagher, Thomas	11.83	3.47	176
Garfield, Mason	15.22	5.55	22
Garvin, C. E.	14.87	5.63	35
Giroux, J. E. & H. J.	12.49	3.83	38
Griffin, Joseph L.	12.69	3.84	15

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Gushee, C. W.	12.73	3.93	193
Herlihy Brothers	12.48	3.94	67
Hickey, M. J.	12.28	3.78	15
Holden, John E.	12.31	3.75	11
Hood, H. P., & Son	12.41	3.87	22
Hutchinson, F. T.	12.26	3.73	42
Jones, William T. Company	12.51	3.90	58
Kendall Brothers	12.32	3.78	40
Kingston, Samuel	13.09	4.21	26
Knapp, George J.	12.54	3.85	76
Lang Brothers	12.26	3.76	24
Larson, Charles	13.83	5.48	157
Lincoln Farms	12.03	3.78	23
Lyndonville Creamery	12.88	4.07	614
Manning, Peter	12.36	3.75	22
Maple Farm Milk Company	12.25	3.70	66
McAdams, J. F.	12.59	3.93	19
McKernan, James	12.51	3.89	33
Millwood Farms	12.39	3.90	76
Munchback, George	12.38	3.80	47
Newton & Pope	12.89	4.22	16
Noble, William F., & Co	12.65	3.90	32
Robinson, A. J.	12.65	3.92	18
Schuster, Adam	12.43	3.92	40
Seven Oaks	12.31	3.79	15
Shick, Jacob	12.70	3.87	89
Somerset Farms	12.75	4.03	9
Sterling Farms Milk	12.62	3.73	18
Stone, H. L.	12.11	3.70	20
Stuart, W. E.	12.56	3.88	16
Swett, Warren	12.44	3.90	49
Turner Centre System	12.52	3.94	16
United Farmers Co-operative Creamery Company	12.57	4.00	19
Vartanian, S.	12.10	3.80	12
Vartanian, K.	13.02	4.30	18
Walker-Gordon	12.62	3.95	8
Weiler, E., & Sons	12.35	3.75	19
Werner Company	12.33	3.80	74
Westwood Farms	12.34	3.75	17

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
White Brothers	12.91	4.10	24
Whiting Milk Companies	12.31	3.75	20
Whittemore, W. D	12.85	3.83	20
Wiswall, George A.	12 53	3.70	30
Woodland, Charles L	12.31	3.80	26

CHAIN STORE MILK.

Name of Dealer.	Supplied by.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
		Per Cent.	Per Cent.	
The Great Atlantic & Pacific Tea Company.	Hood & Sons Company	12.42	3.78	22
The Cloverdale Company	Turner Centre System, Inc.,	12.39	3.81	17
John T. Connor Company	Bellows Falls Co-operative Creamery Company.	12.91	4.18	20
Economy Grocery Stores	Whiting Milk Companies	12.25	3.70	19
The Ginter Company	United Farmers	12.64	3.90	28
Morgan Brothers Company	Morgan Brothers	12.85	4.03	18
O'Keefe's, Inc	Bellows Falls Co-operative Creamery Company.	12.84	4.13	23
Winer, M	Hyman Winer	12.85	4.02	341

WORMS.

If child welfare workers were as assiduous in their search for lumbricoid worms as they are for evidence of inherited syphilis in presumably undernourished children it would be more profitable for the children. Whatever other harmful effects lumbricoid worms may produce it should be remembered that like the hookworm lumbricoid worms give off a poisonous secretion which is absorbed by the host. The effects of lumbricoid worms on a person will vary, as with hookworms, not only in proportion to the number of worms, but also in accordance with the varying susceptibility of individuals to the poison which the worms secrete.— *Exchange.*

AVOID ILLNESS ON VACATION.

Many of us are now beginning to plan our summer vacations and the seashore or the country will be the objective for the majority. Whether we travel by train or automobile we should ever be on the

alert for the hidden dangers that lurk in what we eat and what we drink. And this means not only the polluted spring or well, but the kind of foodstuffs in general that we consume. "Vacation typhoid" is what we must strive to avoid and this disease is always rampant among our people after their return from vacation. If proper care and caution is to be observed where we stop for our vacation then so much is accomplished in warding off infections. We need the rest, the change and the recreation, but we do not want it if we are to make a sacrifice that oftentimes proves fatal. Be careful of the place you select for your vacation and if a better place may be had for a few dollars more in the week do not hestitate to chose the better one. It is good protection and the best insurance.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING MAY, 1927.

Classification.	Number.	Percentage.
After death	4	8.16
Seven days or less	7	14.28
Eight to fourteen days, inclusive	2	4.08
Fifteen to twenty-one days, inclusive	—	—
Twenty-two to thirty-one days, inclusive	4	8.16
Within First Month. (Total)	17	34.68
Within second month	5	10.21
Within third month	1	2.04
Within fourth month	5	10.21
Within fifth month	2	4.08
Within sixth month	1	2.04
Within seventh month	—	—
Within eighth month	—	—
Within ninth month	1	2.04
Within tenth month	3	6.12
Within eleventh month	—	—
Within twelfth month	—	—
Within First Year Preceding Death. (Total)	35	71.42
Within second year	6	12.24
Within third year	1	2.04
More than three years	7	14.28
Grand totals	49	99.98

TEN RULES FOR HEALTHFUL LIVING.

Do you want to be healthy?

By following these rules most everyone can become and remain healthy:

1. Food—Milk, a quart a day for children; cereals; vegetables every day, including leafy ones such as lettuce, spinach, beet tops, to get the necessary vitamines; fruits every day; eggs; meat in moderation; sweets in moderation; 8 glasses of water a day.
2. Posture—Stand and sit straight; stand tall, keep head up, chin in, chest out, abdomen in, back straight, shoulders back; walk largely on balls of feet, with feet straight—not turned out.
3. Exercise—Enough every day to sweat freely. Walk 3 miles a day if you can't do anything better. Play in the open air.
4. Rest—When tired. Never eat a hearty meal when tired. Sleep at least 8 hours with bedroom windows open.
5. Mouth—Brush the teeth after meals and at bedtime. Keep the mouth clean. Salt and water is a good mouth wash.
6. Bowels—At least one good movement a day, preferably after breakfast. Many a headachy, ailing individual owes his trouble to constipation. Coarse cereals, vegetables, fruits like apples, prunes, etc., and plenty of water will usually ward off constipation. Don't use drugs.
7. Baths—A cold bath every day if it makes you feel good, otherwise a tepid bath; a warm cleansing bath once a week.
8. Clothing—Suitable to the season: it should not be too heavy.
9. Communicable Disease—Practise good health habits; avoid the careless spitter and sneezer, the common drinking cup or towel; eat and drink only clean foods. Keep your fingers away from your mouth.
10. Mental Hygiene—In many ways most important of all. Refuse to worry and hurry. Be calm. Control your emotions.

Be Cheerful. Be Friendly. Be Independent.

Follow Emerson's advice and work with your own hands, stand on your own feet, and think your own thoughts. Thus you will acquire poise, the truest sign of a real man or woman.

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH.

PREVENTING DIPHTHERIA.

One day Toxin-antitoxin and Antitoxin were walking down the street. They saw quite a lot of people standing around a large gong. Toxin-antitoxin asked the people what they were doing, at which three of them, namely, Home Remedies, Quarantine and The Doctor, said, "We are trying to stop this dreadful disease."

"What is this disease?" asked Toxin-antitoxin.

"This," said the doctor, "is diphtheria."

"Oh," said Toxin-antitoxin, "I'll show you how to stop it." So lifting up the mallet which he carried, with one mighty blow he started the diphtheria prevention gong ringing.

This shows us that if we wish to fight this disease we must start the gong ringing in our town by being inoculated.—*Kenneth Fisk Bartlett (13 years of age) in "The Modern Health Crusader of Vermont."*

SUMMARY OF THE WORK, MAY 1, 1927.

BUREAU OF ADMINISTRATION.

Prosecutions ordered	10	Personnel:	
Legal notices	268	Leave of absence, military duty	1
Contracts awarded	2	Salaries increased	184
Forcible removals	2	Retirement	1
		Transfer	1

LICENSES, PERMITS, ETC., ISSUED.

Day nursery	1	Hen licenses granted	89
Denatured alcohol	227	Hen licenses refused	1
Dumps approved	2	Manicure-massage	891
Dumps refused	1	Milk	1,751
Grease	7	Garbage transportation	8
Egg breaking establishments	1	Pedlers	167
Manure	1	Stable permit, final	1

MEDICAL DIVISION.

Visits:		Cases brought to Boston for treatment	158
By medical inspectors	1,458	Medical inspectors' activities:	
By veterinarian	394	Deaths investigated	8
By investigator	256		

NURSING SERVICE.

Homes Visited		17,385
Child Hygiene:		
New cases visited	1,589	
Old cases revisited	7,609	
Total child hygiene visits *		9,198

* Includes 133 wrong addresses; 1,122 not seen; 1,255 absent visits.

COMMUNICABLE DISEASES:		
New cases visited	2,127	
Old cases revisited	9,999	
Total communicable disease visits *		12,126
TUBERCULOSIS VISITS:		
Cases visited	2,936	
Contacts visited	1,747	
Suspects visited	427	
Total tuberculosis visits		5,110
MISCELLANEOUS VISITS:		
Infant death investigations		49
Maternal death investigations		8
Patients accompanied to hospital		12
Visits to day nurseries		24
Visits to parochial school children		6
Posture classes		65
Special visits		17
Total number of all visits		21,505
Number hours spent in station by nurses		2,536
Number hours spent in tuberculosis clinics		495
Number hours spent in conference †		1,969
Number hours spent in nurses' conference		114

HEALTH UNITS.

MISCELLANEOUS UNIT ACTIVITIES:	
Complaint of insanitary conditions	26
Number of persons given health and other information	1,150
City visitors	58
Out of city visitors	14
Routine medical examination of adults	4
DENTAL SERVICE:	
Number of children's teeth cleaned	2,000
Number of children treated	374
Prophylaxis	4,337
EYE SERVICE:	
New cases	20
Number of refractions	45
Number of glasses prescribed	21
Number of examinations for diagnosis	22

* Includes 145 ophthalmia cases; 73 wrong addresses; 728 not seen; 801 absent visits.

† This includes child health conferences, vaccination and diphtheria immunizations at stations.

Nose and Throat Clinic:

Number of clinics	9
Number of examinations	552
Number of operations advised	270

Child Hygiene and Nursing Service: *

Number of child health conferences	25
Total attendance at child health conferences	1,256
New babies at conferences	87
Homes visited by nurses	2,714
Home visits to babies and pre-school children	1,803
Infant deaths investigation visits	11
Special visits	7
Number of posture classes	25
Attendance at posture classes	797
Communicable disease visits by nurses in district	1,224

Work Performed by Medical Inspectors:

Vaccinations performed by medical inspectors	486
Number of vaccination certificates issued	283
Antitoxin, antityphoid and toxin-antitoxin administered	89
Number of children examined for day nurseries	4

Tuberculosis Clinics:

Number of clinics	37
Attendance at tuberculosis clinics	507

Boston Lying-in Hospital:

Pre-natal Clinic:	
Number of clinics	9
Attendance	118

Community Health Association:

General Division:	
Home visits by nurses	5,837

Boston Dispensary:

Calls by district physician	42

State Department of Mental Diseases:

Number of clinics	10
Attendance at clinics	41
Visits of workers	168
New cases	3

Infantile Clinic of Children's Hospital:

Number of clinics	2
Attendance	5

* Included in "Child Hygiene Division Report" and "Nursing Service."

CHILD HYGIENE DIVISION.

REPORT OF TOXIN-ANTITOXIN ADMINISTRATION AND VACCINATIONS AT CHILD HEALTH CONFERENCES DURING MAY, 1927.

Station.	Toxin-Antitoxin.			Number of Vaccinations Made.
	First.	Second.	Third.	
Old Town Hall, Brighton	5	6	5	21
31 Lincoln street, Brighton	2	3	6	7
Charlestown Municipal Building	—	1	1	2
Codman Square, Dorchester	10	7	7	93
Columbia Road Municipal Building	—	—	—	37
7 Gordon place, Dorchester	—	—	—	14
East Boston Health Unit	—	—	—	19
Hyde Park Municipal Building	1	3	1	9
Curtis Hall, Jamaica Plain	—	1	1	9
41 North Margin street	13	20	26	59
Roslindale Municipal Building	2	2	1	7
Beth Israel Hospital	—	—	—	61
Children's Hospital	—	—	—	4
1049 Columbus avenue	5	5	6	46
Vine Street Municipal Building	—	—	3	14
140 Dorchester street	6	5	—	41
70 Emerald street	7	5	1	5
Shawmut Avenue Municipal Building	1	—	—	15
122 Tyler street	7	13	10	7
17 Blossom street	1	3	5	10
Totals	60	74	73	480

MONTHLY REPORT OF CHILD HEALTH CONFERENCES MAY, 1927.

Station.	Number of Babies.	Number of Pre-school.	Total Attendance.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	159	13	172	24	7	31	4	38
31 Lincoln street, Brighton	61	17	78	8	2	10	4	20
Charlestown Municipal Building	217	26	243	22	—	22	8	50
Codman square, Dorchester	362	50	412	47	16	63	8	52
Columbia Road Municipal Building	336	4	340	26	—	26	8	43
7 Gordon place, Dorchester	277	14	294	38	2	40	5	58
East Boston Health Unit	313	63	376	59	5	64	8	47
Hyde Park Municipal Building	78	10	88	13	1	14	4	22
Curtis Hall, Jamaica Plain	185	27	212	25	7	32	4	53
41 North Margin street	245	179	424	43	25	68	9	47
Roslindale Municipal Building	72	20	92	12	3	25	4	23
Beth Israel Hospital	171	11	182	25	1	26	4	46
Children's Hospital	136	1	137	23	1	24	5	27
1049 Columbus avenue	348	103	451	50	13	63	9	50
Vine Street Municipal Building	134	8	142	24	1	25	5	28
140 Dorchester street	406	89	495	106	45	151	9	55
70 Emerald street	96	37	133	14	6	20	4	33
Shawmut Avenue Municipal Building,	282	23	275	33	4	37	5	55
122 Tyler street	117	44	161	14	1	15	4	40
17 Blossom street	394	67	461	47	6	53	8	58
Totals	4,359	806	5,165	658	146	804	119	41.2

REPORT OF ACTIVITIES OF CHILD HYGIENE DIVISION MAY, 1927.

Medical inspections made	1,307
Physical examinations	326
Special examinations	908
Throat examinations	15
Schick test	70
Toxin antitoxin	194
Vaccinations	568
Vaccination certificates issued	100
Antityphoid inoculations	14
Conferences	53
Visits to day nurseries	71
Visits to parochial schools	10

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

Stores inspected	3,413
Sanitary defects remedied	172
Complaints at office	46
Referred to Sanitary Division	15
Notices to abate nuisances	149
Court cases	4
Convictions	3
Fines	$40
Discharged	1
Applications for pedlers' licenses approved	167
Vehicles inspected and approved	378
Laboratory Examinations:	
Bacteriological	3
Chemical	4

CONDEMNATIONS.

Meats:	
Beef	4,385½ pounds
Corned beef	10 pounds
Calves pluck	1 pound
Chicken	4 pounds
Frankfurts	10 pounds
Kidneys	118¼ pounds
Liver	3½ pounds
Poultry	126 pounds
Pork	422 pounds
Sausages	10 pounds
Veal	55 pounds
Fish:	
Clams	2½ gallons
Halibut	1 pound
Lobster	3 pounds
Miscellaneous fish	102½ pounds
Oysters	2½ gallons
Fruit:	
Dates	10 packages
Lemons	¼ crate
Olives	327 pounds
Oranges	42 crates
Apples	½ bushel
Vegetables:	
Cabbages	20 pounds
Miscellaneous vegetables	299 pounds
Tomatoes	425 pounds
Turnips	1 bushel
Miscellaneous:	
Bread	40 loaves
Chocolates	3 pounds
Cake	25 loaves
Canned goods	141 cans
Doughnuts	3 dozen
Jelly	10 glasses
Marshmallow	32 cans
Milk	3 quarts
Olive oil	6 gallons
Relishes	70 bottles

LIVE STOCK INSPECTION (Brighton Abattoir).

Cattle inspected	2,689	Parts condemned (lbs.)	15,096
Calves inspected	5,922	Animals condemned	121
Swine inspected	4,083		

DAIRY DIVISION.

Total inspection	1,183	Total cattle inspected	10,845
Dairies inspected	769	Inspections of milk plants and licensed dealers	255
Scoring above 50*	548	Bacteriological examinations	65
Scoring below	221	Country creamery inspections	14
With milk rooms	563	Sediment tests	56
Without milk rooms	206		
Inactive	20		

* Passable mark.

BUREAU OF MILK INSPECTION.

SAMPLES EXAMINED.

CHEMICAL:	
Milk from wagons	232
Milk from stores	725
Milk brought by citizens	10
Vinegar	33
Shrimp	1
Ice cream	5
Olive oil	1
Medicine	1
Salt	1
Liquor	7
BACTERIOLOGICAL:	
Milk	639
Ice cream	87
Court cases	4
Fines	$110

SANITARY INSPECTION.

Original inspections	2,273	Legal notices served	268
New reports	1,859	Complaints investigated	622
Reinspections	7,358	Court cases authorized	8

BACTERIOLOGICAL LABORATORY.

Diphtheria	1,039
Tuberculosis	423
Typhoid	110
Gonorrhea	801
Gonorrheal ophthalmia	76
Syphilis	1,305
Other examinations *	234
Bacteriological examinations of milk	639
Bacteriological examinations of ice cream	87
Swimming pools examined	64
Water from schools	8
Extra water	7

* Malaria, 6; feces for typhoid, 79; urine for typhoid, 79; tests for virulence, 3; genito-urinary tuberculosis, 19; rabies, 1; smear for organisms, 1; paratyphoids, 2; chicken for contamination, 1; shrimp for sand, 1; shears for hæmolitic streptococci, 39; shrimp for foreign matter, 1; faecis for hook worm, 1; dark field examination, 1.

VITAL STATISTICS, MAY, 1927.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING MAY, 1927, WITH COMPARATIVE FIGURES FOR MAY, 1926.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
All Causes:						
Total deaths	967	1,028	—61	14.63	15.67	—1.04
Nonresidents deducted	789	821	—32	11.94	12.52	—.58
By Age:						
Under one year	132	113	+19	2.00	1.72	+.28
One year to four years, inclusive	43	58	—15	.65	.88	—.23
Sixty years and over	390	412	—22	5.90	6.28	—.38
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	62	56	+6	.94	.85	+.09
Arteriosclerosis	26	28	—2	.39	.43	—.04
Heart disease	181	213	—32	2.74	3.25	—.51
Nephritis, chronic	53	57	—4	.80	.87	—.07
Infant and Maternal Mortality:						
a. Total registered live births	1,239	1,381	—142	18.75	21.05	—2.30
b. Registered stillbirths	43	50	—7	.65	.76	—.11
Stillbirths per 1,000 births and stillbirths				33.54	34.94	—1.40
c. Deaths of mothers from causes incident to childbirth	18	11	+7	.27	.17	+.10
Deaths of mothers per 1,000 births and stillbirths				14.04	7.69	+6.35
Deaths of children in first year of life	132	113	+19	2.00	1.72	+.28
Deaths in first year per 1,000 live births,				106.54	81.82	+24.72
Violence:						
Accidents	42	56	—14	.63	.85	—.22
Homicides	1	—	+1	.015	—	+.015
Suicides	12	9	+3	.18	.14	+.04
Miscellaneous:						
Alcoholism, acute or chronic	4	17	—13	.06	.26	—.20
Broncho-pneumonia	48	46	+2	.73	.70	+.03
Cancer	105	93	+12	1.59	1.42	+.17
Cirrhosis of the liver	7	6	+1	.10	.09	+.01
Diabetes mellitus	16	11	+5	.24	.17	+.07
Diarrheal diseases, children under two years of age	6	6	—	.09	.09	—

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	4	1	+3	.06	.015	+.045
Deaths.	1	1	—	.015	.015	—
Cerebrospinal meningitis.....Cases..	1	1	—	.015	.015	—
Deaths.	1	1	—	.015	.015	—
Diphtheria.....Cases..	132	72	+60	2.00	1.10	+.90
Deaths	3	4	—1	.04	.06	—.02
Influenza.....Cases..	12	22	—10	.18	.33	—.15
Deaths.	4	6	—2	.06	.09	—.03
Measles.....Cases..	590	624	—34	8.93	9.51	—.58
Deaths.	5	8	—3	.07	.12	—.05
Pneumonia (lobar).....Cases..	136	140	—4	2.06	2.13	—.07
Deaths.	62	57	+5	.94	.87	+.07
Scarlet fever.....Cases..	473	243	+230	7.16	3.70	+3.46
Deaths.	8	4	+4	.12	.06	+.06
Tuberculosis (pulmonary).....Cases..	166	198	—32	2.51	3.02	—.51
Deaths.	49	76	—27	.74	1.16	—.42
Tuberculosis (other forms).....Cases..	34	66	—32	.51	1.01	—.50
Deaths.	10	15	—5	.15	.23	—.08
Typhoid fever.....Cases..	6	4	+2	.09	.06	+.03
Deaths.	1	—	+1	.015	—	+.015
Whooping cough.....Cases..	54	345	291	.82	5.26	—4.44
Deaths.	1	8	—7	.015	.12	—.105

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1927 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

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MONTHLY BULLETIN
HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

VOL. 16. BOSTON, JULY, 1927. NO. 7

THE DIAGNOSIS OF TYPHOID FEVER.

A WORD TO PHYSICIANS.

Every year, for a good many years, between a hundred and a hundred and fifty persons sick with typhoid fever within the city have come to the knowledge of the Boston Health Department

Some of these cases have been reported to the Health Department by physicians. Others have been discovered by the department itself. Still others doubtless occur in the city every year unrecognized by the physicians and unknown to the Health Department.

Many cases are definitely traced to infection outside the city. In other instances, a history of trips away from the city and state seems to justify the presumption of infection while traveling.

For many years there has been an accumulation of circumstantial evidence that the eating of clams from unknown sources has been accountable for typhoid cases of local origin. The contamination of human hands in connection with the baiting of fishermen's gear with clams and other shell fish and sand worms has likewise appeared to be responsible for certain cases of typhoid fever within the city limits.

The investigation of scattered individual cases of typhoid fever even when occurring among intelligent people is usually handicapped by the fact that the patient himself is found to be too sick to aid the investigator, when an investigator is most needed in the interest of public health. For this reason the source of infection in many cases has to be put down in our official records as unknown. In some of the cases thus officially characterized, circumstances may suggest infection by unknown "carriers," either by persons who have recovered from an attack of typhoid fever or by persons coming down with the disease, "walking typhoids," if that term be preferred.

In the course of the last twenty years the Boston Health Department has been able nearly every year to trace two or three cases of typhoid fever to a chronic carrier in the same household. Thereafter the danger of the "carrier" to his household and to the community has apparently ceased. Persons found to be "carriers" are living in the city and are not giving rise to cases of typhoid fever so far as the Health Department is able to discover. There are doubtless many more who are or have been "carriers" of whom the Health Department has no knowledge, yet for twenty years at least no serious outbreak of typhoid fever has occurred in Boston for which a "chronic carrier" can even be suspected of responsibility. For ten years or more over 90 per cent of the milk consumed in Boston has been pasteurized. Perhaps there may be other reasons to explain the lack of evidence of the danger of the chronic "typhoid carrier" to the people of Boston. Or perhaps it may be just luck which may turn at any time, but certainly Boston's record in recent years does not indicate that the chronic typhoid carrier is a serious menace in this community.

On the other hand the beginning case of typhoid fever, still about and following his or her customary vocation, the "walking typhoid" or the unrecognized case, sick in the home, the boarding house, the hospital or other institution, is constantly spreading the disease and is an ever present potential cause of a serious typhoid outbreak in this city.

Some years ago 300 cases of typhoid fever suddenly appeared in one district of the city as the result of the accidental contamination of milk by a dealer who was a "walking typhoid." From time to time the Health Department discovers that chance alone has averted the consequences of a similar wholesale contamination of food by an unrecognized typhoid fever patient. Secondary cases of typhoid in a family are so frequent that they might perhaps be characterized as the rule rather than exceptional.

To a great extent the public danger from early unrecognized cases of typhoid fever is inevitable. This fact constitutes the strongest argument for antityphoid vaccination in civil as well as military life. The disease is, of course, comparatively rare in Boston, but in consequence of this fact there are special elements of public danger. The infrequency of typhoid in itself means fewer natural immunes. As a consequence also of its infrequency the possibility of typhoid fever is not constantly in the minds of physicians and persons who feel ill and their families, as in places where typhoid is prevalent. A physician here is not likely to be called to a case of typhoid fever until the patient has had all the opportunity to infect other members of his household that he may have. By the time a case is brought to the attention of a Boston physician his chances of diagnostic help from a blood culture are probably past. Perhaps this may account for the common local practice of not attempting a blood culture.

This brings us to the consideration of another entirely too common habit of Boston physicians which has led to the writing of this article — a tendency of the physician to refuse to trust to clinical symptoms of typhoid fever and to look to the laboratory to relieve him of his progessional responsibilities and make his diagnosis. It is really exceptional for a Boston physician to notify the Health Department of a case of typhoid fever until he has obtained a report of a positive Widal reaction from some source of his own selection. The consequences of this practice will appear from the following:

The Health Department is notified that so and so is ill with typhoid fever at his home. The routine investigation by the department discloses the fact that the patient has been ill two or three weeks or perhaps longer, but the case was not reported to us until a positive Widal report was obtained. Too often inquiry also shows that there was a previous case of sickness with similar clinical symptoms in the family of which the Health Department was never notified at all because "all the Widals were negative." An attempt to find out if the Widals were taken at a stage of the sickness when a positive reaction might possibly be expected ends in doubt, because of wide discrepancies in testimony regarding the date of onset of symptoms.

Most cases of typhoid fever in Boston are reported to the Health Department from hospitals. Often they are reported in bunches, two or three or even six notifications being received from a hospital in the same mail. Inquiry usually brings out the information that they are patients who have been cases in the hospital for varying periods, perhaps even as long as four weeks, and that a common source of infection was not suspected. Remonstrance at delay

in reporting is met by the reply that in all cases diagnosis has just been made, that up to the present "all the Widals have been negative."

Too often investigation shows that there have been previous cases of sickness with similar clinical symptoms in the homes whence these hospital cases have come. An inquiry results in information from the attending physician that he suspected typhoid fever, but did not notify the Health Department because "the Widals were negative."

To take one specific instance. On the strength of a positive Widal reaction, a hospital notified the Health Department that a patient was ill with typhoid fever. The patient was admitted to the hospital in August. Investigation in the patient's home showed that successive cases of sickness with clinical symptoms of typhoid fever had been developing in the same household since May and that the case which finally was sent to the hospital was the seventh in which the clinical symptoms indicated typhoid fever. The cases were not reported as typhoid fever because, as we were told, an eminent consultant had advised the young attending physician that he was not justified in reporting the cases as typhoid fever unless positive Widals were obtained. Our efforts to discover why all the Widals were negative resulted as usual in nothing instructive. Blood specimens had been sent to various laboratories. Specimens had been taken from the successive cases and at different times. So far as could be made out at the time of our investigation, some of the specimens had been taken from some of the cases at times when a positive Widal reaction might be expected in a case of typhoid fever.

An attempt to find out why a laboratory returns a negative report in sickness of any sort when a positive is expected from clinical symptoms, or vice versa, is likely to result only in a fruitless controversy. The laboratory may very properly say that it is prepared to give the physician a certain special, very definitely limited sort of information which the physician ought to know how to utilize judiciously, but that it does not undertake to make the physician's diagnosis for him.

If a negative Widal report from a laboratory should lead to the controversy one may expect to be told that talk of a characteristic typhoid fever odor is so "unscientific" as to be foolish, that a supposed typhoid temperature curve and indications of digestive derangement are not incompatible with various infective complexes and that other conditions besides a typhoid ulceration of Peyer's patches may produce a hemorrhage from the bowels. Or, on the other hand, one may be asked if he would feel justified in pronouncing a puffy-eyed patient with trichinosis a case of typhoid fever because the blood happens to give a positive Widal reaction.

Laboratory reports, including those on blood sent in for a Widal reaction, are frequently inconsistent or inexplicable. It may be impossible to show that a laboratory report is wrong, but one may prove that laboratories may be inconsistent in their reports, if he thinks he has justification for adopting the practice of some physicians of sending all their laboratory specimens simultaneously to three or four different laboratories.

In the event of inconsistent Widal reports it may be that our bacteriological hypotheses may as yet fail to cover everything which may interfere with or produce the agglutination phenomenon, or there may be something wrong with the laboratory reagents, or the laboratory technician may be incompetent, or a clerk may make a clerical mistake, but the important thing for the physician to remember is that when something serious happens public opinion will hold him responsible for the diagnosis and not the laboratory.

Furthermore, it is to be remembered that atypical cases of typhoid fever are common. Any case of continued temperature from obscure cause should suggest typhoid. The welfare of the patient and his family and the public all call for the treatment of a possible case of typhoid as typhoid fever before a positive Widal can be expected.

The Health Department's experiences are not all of the kind to which reference has been made and as a refreshing contrast to the cases which have been cited the following may be mentioned as a concrete example of the way in which one physician fulfilled his obligations to his patient and to the public.

One morning a physician telephoned the Health Department that he had just been called to see a boy living in a rural outlying part of the city; that he believed the boy had typhoid fever, and that he had been told that one of the boy's playmates had a similar sickness. The physician further informed us that continued inquiry on his part had made him suspicious of a dairy in the neighborhood, a proprietor of which was said to have the "grippe." The dairy referred to was one of the few small ones still remaining within the city limits. It was operated by two partners. They owned eighteen cows and also bought milk from other producers. They had a milk route in another part of the city and supplied about 150 families besides other customers.

As a result of this physician's telephone report there were found in the neighborhood within a few hours a dozen hitherto unrecognized cases of typhoid fever, including the two proprietors of the dairy.

The source of the infection was one of the proprietors, a "walking typhoid." Eventually thirty-five cases of the disease were discovered traceable to the milk dealer. As a result of this physician's sensible action in reporting his case to the Health Department, on clinical symptoms on his first call, not a single secondary case occurred in the outbreak. All the cases were residents of the immediate vicinity of the dairy except one, a woman who worked one day helping the dairy proprietor's wife with her housework when he first became sick. The product of the dairy was pasteurized and this procedure evidently served to protect most of the customers. Those who contracted typhoid fever may possibly have been sold unpasteurized milk, but it is more probable that the sick proprietor may have contaminated some clean bottles by putting his fingers in them to carry them to the "filler." The proprietor suspected of doing this died without opportunity to deny it.

We cannot help thinking how different a story we would have to tell if the physician who had telephoned us had refused to commit himself to a diagnosis on his patient's clinical symptoms and had waited until some laboratory had furnished him with a report of a positive Widal reaction. Nor can the deceased dairyman's family help believing that their condition might be very different today if he had gone to this physician for treatment for his "grippe."

WHAT ARE THE BEST USES OF A VACATION?

The best use of a vacation is suggested by the word "recreation," taken in the more literal sense, *to make over anew.*

Human experience has shown that health may be benefited and capacity for work increased by occasional changes from customary habits of body and mind. One should, therefore, aim to make use of a vacation to place himself in a new environment where he can see new sights, meet new people, hear new ideas, think new thoughts and find new opportunities for physical activities to strengthen disused muscles.

The change, however, from the customary to the unaccustomed must not be too violent or abrupt. Our vital functions reflect to a great extent an adjustment to customary habits. New mental efforts and new forms of muscular exertion cause fatigue more quickly than those which have become habitual. Fatigue, either physical or mental, is always dangerous.

The change of which the average person stands most in need when he first starts on a vacation is *rest*, physical and mental. This being accomplished the transition to new activities should be gradual.

To cite specific examples: In order to avoid ill effects one should proceed cautiously in exposing himself for prolonged periods to the direct rays of a summer sun, in subjecting his digestive apparatus to surprises in the way of unusual hours of eating or unaccustomed kinds of food or drink, and should remember that strength does not come from straining muscles weakened by disuse.

Too often a vacation does more harm than good, even when it has not been the cause of definite illness. The extent to which a vacation will prove to have served truly as a *recreation* will depend on the selection of a suitable change of environment and the care with which it is used in meeting the needs of the individual with regard to rest and new activities.

—*Editorial Boston Traveler, July 2, 1927.*

SOUTH BOSTON HEALTH UNIT.

The new $370,000 health unit at Dorchester street and West Fourth street, South Boston, established from the income of the $5,000,000 fund left to the city by the late George Robert White, was dedicated Tuesday morning, June 28 at 11 o'clock and opened by Mayor Nichols.

Manager George E. Phelan presided over the exercises, which were opened with invocation by the Rev. John A. McClelland, pastor of the Fourth Presbyterian Church, South Boston, and closed with benediction by the Rev. Joseph F. Coppinger, pastor of St. Augustine's Church.

The dedicatory address was delivered by Dr. Haven Emerson, professor of public health administration at Columbia University. Charles A. Coolidge, architect, presented the keys of the new building to George R. Nutter, president of the Boston Bar Association, who, as a member of the fund trustees, presented the health unit to the city, Mayor Nichols making the acceptance.

The speakers included Health Commissioner Francis X. Mahoney, Dr. Edward F. Timmins, president of the South Boston Medical Society; Dr. John W. Bartol, president of the Boston Health League, and Dr. George H. Bigelow, State Commissioner of Public Health.

Following the dedication exercises, the Mayor gave a luncheon to the invited guests at the Ritz-Carlton at one o'clock.

The building itself is equipped with a spacious sun room on the third floor, covered with a special glass roof which permits the penetration of the ultra violet sun's rays. In addition, the windows, which slide down below the sill line, permit the entire three sides of the room to be open, insuring an abundance of fresh air.

The first floor is designed essentially for easy accessibility to the various treatment rooms from a central waiting room which is entered directly from the main entrance vestibule. Grouped round the waiting room and preparation room are the eye and dental clinics, heliotherapy and X-ray laboratories, doctors' offices, and consultation cubicles. The second floor contains the offices of health and charitable associations, and a large auditorium with modern moving picture projector and stage for public lectures.

The full program of the exercises was as follows:

Presiding, Mr. George E. Phelan, Manager, George Robert White Fund. Invocation by Rev. John A. McClelland, pastor, Fourth Presbyterian Church, South Boston. Presentation of keys to the trustees by Mr. Charles A. Coolidge of Coolidge, Shepley, Bulfinch & Abbott, architects. Presentation of Health Unit to the city by Mr. George R. Nutter, president, Bar Association, City of Boston. Acceptance by his Honor the Mayor, Malcolm E. Nichols. Address by Dr. Francis X. Mahoney, Health Commissioner. Address by Dr. Edward F. Timmins, president, South Boston Medical Society. Address by Dr. John W. Bartol, president, Boston Health League. Address by Dr. George H. Bigelow, Commissioner of Public Health, Commonwealth of Massachusetts. Dedicatory address by Dr. Haven Emerson, professor of Public Health Administration, Columbia University, New York. Benediction by Rev. Joseph F. Coppinger, pastor, St. Augustine Church, South Boston.

SURVEY OF THE QUALITY OF BOSTON MARKET MILK.

The following is the result of a survey made of market milk sold in Boston by dealers and chain stores during June, 1927. In Massachusetts the statute law requires a minimum of 12 per cent solids and 3.35 per cent butter fat.

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Alden Brothers	12.69	4.03	26
Allen, Fred H	12.62	3.80	22
Antetomasso, Peter	12.84	4.10	18
Barron, C. W	14.00	4.80	10
Bergmann, J. H	12.69	3.95	71
Bolio, William	10.97	2.88	101
Brandley, F. J. & P. J	12.16	3.65	10
Casey, James	13.60	4.40	36
Cashin, James	12.52	3.85	116
Cedar Hill	13.01	4.25	11
Chapin, George	12.40	3.95	90
Childs Brothers	12.65	4.02	40
Clapp, Frank L	12.81	3.87	24
Clark, Levi	12.14	3.65	48
Coleman, David	11.87	3.45	60
Converse, M. M	12.81	4.18	85
Corkery, J. J	12.36	3.83	105
Cosgrove, Martin S	12.45	3.65	46
Cummings, F. S	12.09	3.63	20
Cunningham, Paul	13.30	4.98	7
Cusick, W. H	12.62	3.65	22
Dean, Louis W	13.22	4.25	28
Deerfoot Farm	12.84	4.05	14
Denehy, Timothy	12.19	3.85	110
Driscoll, William B., Company	12.60	3.88	19
Duggan Brothers	12.68	3.80	45
Edgerly, Frank S	12.23	3.85	40
Elm Spring Farm Company	12.14	3.55	42
Ferguson, M. D	12.69	3.90	733
Furbush, A. J	13.14	3.93	27
Garfield, Mason	15.12	5.73	6
Garvin, C. E	14.22	5.10	10
Giroux, J. E. & H. J	12.62	4.00	16
Griffin, Joseph L	12.80	3.85	26

Name of Dealer.	Solids.	Fat.	Bacteria. Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Gushee, C. W.	12.44	3.63	132
Herlihy Brothers	12.33	3.75	65
Hickey, M. J.	12.41	3.75	10
Holden, John E.	12.44	3.87	94
Hood, H. P., & Son	12.46	3.78	19
Hutchinson, F. T.	12.29	3.67	101
Jones, William T., Company	12.70	4.00	18
Kendall Brothers	12.32	3.73	60
Kingston, Samuel	12.89	4.08	53
Knapp, George J.	12.70	3.85	40
Lang Brothers	12.35	3.75	30
Larson, Charles	12.43	3.75	26
Lincoln Farms	12.33	4.05	14
Lynndonville Ceamery	12.93	4.12	224
Manning, Peter	12.35	3.55	121
Maple Farm Milk Company	12.28	3.63	37
McAdams, J. F.	12.82	4.00	20
McKernan, James	12.64	3.85	20
Millwood Farms	12.58	3.98	40
Munchback, George	12.37	3.68	60
Newton & Pope	13.22	4.40	8
Noble, William F., & Co.	12.94	4.03	29
Robinson, A. J.	12.59	3.93	60
Schuster, Adam	12.57	3.90	23
Seven Oaks	12.45	3.80	17
Shick, Jacob	12.61	3.85	38
Somerset Farms	12.99	4.12	8
Sterling Farms Milk	12.86	3.85	24
Stone, H. L.	12.18	3.70	24
Stuart, W. E.	12.73	3.93	15
Swett, Warren	12.12	3.73	406
Turner Center System	12.37	3.72	18
United Farmers Co-operative Creamery Company	13.08	4.15	20
Vartanian, S.	12.58	3.85	16
Vartanian, K.	12.58	4.00	80
Walker-Gordon	12.47	3.65	8
Weiller, E., & Sons	12.64	3.75	40
Werner Company	12.56	3.92	244
Westwood Farms	12.57	3.68	22

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
White Brothers	12.86	4.00	20
Whiting Milk Company	12.29	3.73	26
Whittemore, W. D.	12.69	3.78	23
Wiswall, George A.	12.47	3.90	38
Woodland, Charles L.	12.07	3.48	32

CHAIN STORE MILK.

Name of Dealer.	Supplied By.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
		Per Cent.	Per Cent.	
The Great Atlantic & Pacific Tea Company.	Hood & Sons Company	12.36	3.88	32
The Cloverdale Company	Turner Center System, Inc.	12.39	3.73	23
John T. Connor Company	Bellows Falls Co-operative Creamery Company.	12.76	4.05	17
Economy Grocery Stores	Whiting Milk Companies	12.15	3.60	28
The Ginter Company	United Farmers	12.75	4.05	19
Morgan Brothers Company	Morgan Brothers	12.70	4.00	32
O'Keeffe's, Inc.	Bellows Falls Co-operative Creamery Company	12.64	3.95	19
Winer, M.	Hyman Winer	13.01	4.18	204

LARGE CONDEMNATION.

On the 27th of June, inspectors of the Food Division made the largest single seizure of meat in the history of the Food Division. More than ten tons (or about 20,758 pounds) of pickled, boneless cow meat were condemned and destroyed at a wholesale establishment in the market district.

This lot of meat, lightly salted and packed in fifty-four tierces was shipped here by a Canadian firm. The meat arrived at the Boston market in a tainted, unwholesome condition.

Market inspectors denatured the meat, which was finally disposed of to the New England Rendering Company, Brighton. The probable cause was from "heating" or, possibly, too light a cure.

It was later learned that the forequarters comprising this shipment were originally put into a freezer and frozen. Sometime later they were taken out and "boned" and packed in the tierces with a supposed one per cent solution of salt. The meat showed "heat" later, for which three possible reasons are assigned: First, it may

have been frozen with the animal heat still remaining; second, when it was thawed out for boning it may have been given too high a temperature; third, the salt curing may have been too light. This is said to have been the first time that this Canadian firm has attempted such a light salting, and they are now convinced it is an unsafe process for long shipments.

The meat was shipped June 7, via Boston and Maine Railroad, arriving in Boston June 14. It was allowed to remain in the refrigerator cars until June 23, when it was trucked to the Boston concern, where the unwholesome odor attracted the attention of the inspector on the district.

The Boston firm thought the condition might be largely overcome by "airing," but it was not and finally on the 27th the meat was destroyed for food purposes.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING JUNE, 1927.

Classification.	Number.	Percentage.
After death	4	7.84
Seven days or less	4	7.84
Eight to fourteen days, inclusive	2	3.93
Fifteen to twenty-one days, inclusive	3	5.88
Twenty-two to thirty-one days, inclusive	4	7.84
Within First Month. (Total)	17	33.33
Within second month	1	1.96
Within third month	4	7.84
Within fourth month	2	3.93
Within fifth month	1	1.96
Within sixth month	2	3.93
Within seventh month	1	1.96
Within eighth month	1	1.96
Within ninth month	3	5.88
Within tenth month	—	—
Within eleventh month	—	—
Within twelfth month	—	—
Within First Year Preceding Death. (Total)	32	62.75
Within second year	4	7.84
Within third year	1	1.96
More than three years	14	27.45
Grand totals	51	100.00

MASSACHUSETTS ASSOCIATION OF BOARDS OF HEALTH.

The regular meeting and luncheon of the Massachusetts Association of Boards of Health was held at the Worcester Country Club on July 21. The program included a paper, "Positive Pasteurization," by George W. Putnam, Chief of Bureau of Dairy Products. Health Department, Chicago, and a discussion by Leslie C. Frank, United States Public Health Service.

SUMMARY OF THE WORK, JUNE 1, 1927.

BUREAU OF ADMINISTRATION.

Prosecutions ordered	4	Personnel:	
Legal notices	186	Resignation	1
Lying-in Hospital approved	1	Leave of absence	1
Contract awarded	2	Pension granted	1
Stable hearing	1	Appointments, temporary	6
Order issued	1	Appointment, permanent	1
Forcible removals	2	Transfers to this department,	3
Personnel:		Transfers from this department	1
Change in designation	1		

LICENSES, PERMITS, ETC., ISSUED.

Burial permits	972	Manicure-massage	696
Denatured alcohol	11	Milk	1,010
Dump approved	1	Garbage	2
Dumps disapproved	2	Pedlers	151
Grease	17	Stable permit, final	1
Hen licenses	52	Stable permit, temporary	1
Hen license revoked	1	Undertaker	1

MEDICAL DIVISION.

Visits:		Cases brought to Boston for treatment	151
By medical inspectors	1,224	Deaths investigated	10
By veterinarian	320		
By investigators	271		

HEALTH UNITS.

Miscellaneous Unit Activities:	
Complaint of insanitary conditions	32
Number of persons given health and other information	1,037
City visitors	28
Out of city visitors	9
Dental Service:	
Number of children's teeth cleaned	182
Number of children treated	1,328
Prophylaxis	3,296
Eye Service:	
New cases	20
Number of refractions	35
Number of glasses prescribed	10
Number of examinations for diagnosis	18

Nose and Throat Clinic:	
Number of clinics	5
Number of examinations	243
Number of operations advised	85
Child Hygiene Division:	
Number of child health conferences	26
Total attendance at conferences	1,382
New babies at conferences	166
New preschool age children at conferences	16
Vaccinations performed	214
Vaccinations certificates issued	269
Number of examinations for camps and day nurseries	213
Number of posture clinics	27
Total attendance at posture clinics	335
Number of posture classes for nurses	5
Number of toxin antitoxin administrations	23
Tuberculosis Clinics:	
Number of clincs	37
Attendance at tuberculosis clinics	488
New cases	46
Nursing Service:	
Homes visited by nurses	3,155
Total visits to babies and preschool children	1,994
Total communicable disease visits	838
Total tuberculosis visits	482
Infant death investigation	26
Maternal death investigations	1
Special visits	40
Boston Lying-in Hospital:	
Pre-natal Clinic:	
Number of clinics	8
Attendance	131
New cases	40
Community Health Association:	
General Division:	
Home visits by nurses	5,421
Boston Dispensary:	
Calls by district physician	28
State Department of Mental Diseases:	
Number of clinics	9
Attendance at clinics	39
Visits of workers	139
New cases	3
Infantile Clinic of Children's Hospital:	
Number of clinics	2
Attendance	9

CHILD HYGIENE DIVISION.

REPORT OF TOXIN-ANTITOXIN ADMINISTRATION AND VACCINATIONS AT CHILD HEALTH CONFERENCES DURING JUNE, 1927.

Station.	Toxin-Antitoxin.			Number of Vaccinations Made.
	First.	Second.	Third.	
Old Town Hall, Brighton	6	10	8	14
31 Lincoln street, Brighton	1	4	4	8
Charlestown Municipal Building	1	—	—	12
Codman Square, Dorchester	6	8	7	91
Columbia Road Municipal Building	8	4	4	104
7 Gordon place, Dorchester	2	2	—	6
East Boston Health Unit	—	—	—	11
Hyde Park Municipal Building	2	2	5	10
Curtis Hall, Jamaica Plain	1	1	—	30
41 North Margin street	—	1	1	13
Roslindale Municipal Building	3	—	1	30
Beth Israel Hospital	1	1	1	42
Children's Hospital	—	—	—	1
1049 Columbus avenue	1	—	1	37
Vine Street Municipal Building	5	4	1	51
140 Dorchester street	6	12	8	34
*70 Emerald street	—	2	7	—
†57 East Concord street	—	—	—	1
Shawmut Avenue Municipal Building	—	—	—	9
122 Tyler street	6	3	2	6
17 Blossom street	1	1	1	3
Totals	50	55	51	513

* This station closed June 15, 1927. † This station opened June 23, 1927.

MONTHLY REPORT OF CHILD HEALTH CONFERENCES JUNE, 1927.

Station.	Number of Babies.	Number of Preschool.	Total Attendance.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	235	9	244	28	2	30	5	49
31 Lincoln street, Brighton	109	21	130	20	4	24	5	26
Charlestown Municipal Building	410	50	460	38	7	45	9	51
Codman square, Dorchester	561	80	641	84	29	113	9	71
Columbia Road Municipal Building	635	2	637	93	—	93	9	71
7 Gordon place, Dorchester	267	4	271	34	—	34	4	68
East Boston Health Unit	518	90	608	97	12	109	9	68
Hyde Park Municipal Building	191	38	229	29	11	40	4	57
Curtis Hall, Jamaica Plain	236	58	294	34	7	41	5	59
41 North Margin street	240	109	349	45	14	59	9	39
Roslindale Municipal Building	283	49	332	48	5	53	4	88
Beth Israel Hospital	221	40	261	35	3	38	5	52
Children's Hospital	103	2	105	9	—	9	4	26
1049 Columbus avenue	405	76	481	73	16	89	9	53
Vine Street Municipal Building	338	23	361	73	15	88	9	40
140 Dorchester street	470	80	550	89	26	115	9	61
*70 Emerald street	95	21	116	17	1	18	3	39
†57 East Concord street	54	11	65	5	1	6	2	32
Shawmut Avenue Municipal Building,	179	13	192	23	5	28	4	48
122 Tyler street	135	43	178	18	1	19	4	45
17 Blossom street	400	74	474	54	9	63	9	53
Totals	6,085	893	6,978	946	168	1,114	130	52.2

* This station closed June 15, 1927. † This station opened June 23, 1927.

REPORT OF ACTIVITIES OF CHILD HYGIENE DIVISION JUNE, 1927.

Number of inspections made	1,098
Physical examinations for camps and day nurseries	338
Special examinations	560
Throat examinations	0
Schick Test	30
Toxin-antitoxin administrations	91
Vaccinations performed	186
Vaccinations certificates issued	31
Antityphoid innoculations given	2
Conferences	8
Visits to day nurseries	46
Visits to Parochial Schools	0

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

Reinspections	504
Stores inspected	4,163
Sanitary defects remedied	183
Complaints at office	49
Referred to Sanitary Division	12
Milk applicants	49
Notices to abate nuisances	250
Court cases	3
Convictions	1
Fines	0
Continued	1
Discharged	1
Filed after conviction	1
Applications for pedlers' licenses approved	152
Vehicles inspected and approved	654

Laboratory Examinations:

Bacteriological	2
Chemical	2

CONDEMNATIONS.

Beef	1,112 pounds	Grapefruit	37
Chicken	6½ pounds	Jelly	15 pails
Frankfurts	218 pounds	Lemons	51
Liver	41 pounds	Oranges	9 boxes
Livers	7	Oranges	103 dozen
Pork	36 pounds	Strawberries	5 crates
Poultry	226 pounds	Tomatoes	500 pounds
Plucks	17	Tomatoes	1 bushel
Sausages	2 pounds	Sweet peppers	1 bushel
Sweetbreads	51	Canned corn	2 cases
Tongues	10	Piccalilli	2 quarts
Veal	509 pounds	Olive oil	6 gallons
Miscellaneous fish	200 pounds	Peanuts	2 bags
Blackberries	32 quarts		

LIVE STOCK INSPECTION (Brighton Abattoir).

Cattle inspected	2,454	Parts condemned (lbs)	12,031
Calves inspected	3,091	Animals condemned	48
Swine inspected	3,537		

DAIRY DIVISION.

Total inspections	1,127	Inactive	16
Dairies inspected	810	Total cattle inspected	11,003
Scoring above 50 *	607	Inspections of milk plants and licensed dealers	277
Scoring below	203	Country creamery inspections	15
With milk rooms	591		
Without milk rooms	219		

* Passable mark.

BUREAU OF MILK INSPECTION.

SAMPLES EXAMINED.

CHEMICAL:	
Milk from wagons	204
Milk from stores	928
Milk brought by citizens	10
Vinegar	11
Ice cream	36
Water	2
Candy	1
Whiskey	4
Soft drink	1
Canned goods	1
BACTERIOLOGICAL:	
Milk	613
Ice cream	112
Court cases	1
Fines	$15

SANITARY INSPECTION.

Original inspections	2,188	Legal notices served	167
Course for action found	1,412	Complaints investigated	550
Reinspections	6,240	Court cases authorized	4
Nuisances abated	1,366	Fines	$90

BACTERIOLOGICAL LABORATORY.

Diphtheria	810
Tuberculosis	359
Typhoid	51
Gonorrhea	713
Gonorrheal ophthalmia	51
Syphilis	1,272
Other examinations *	178
Bacteriological examinations of milk	613
Bacteriological examinations of ice cream	112
Swimming pools examined	90
Water from schools	10
Extra waters	6

* Malaria, 2; feces for typhoid, 12; urine for typhoid, 12; tests for virulence, 4; genitourinary tuberculosis, 17; rabies, 1; paratyphoids, 4; smear for Vincent's angina, 3; swabs from hemolitic streptococci, 108; urines for sugar and albumen, 10; smear for colitis, 1; dark field examinations, 4.

MONTHLY REPORT OF VENEREAL DISEASE ACTIVITIES, JUNE, 1927.

SYPHILIS.

Cases under investigation June 1	8
New cases	17
	25

Disposition of Cases.

Unable to locate	5
False address	3
Out of town—address unknown	1
Under treatment	1
Under investigation	15
	25
New cases reported by number	70

GONORRHEA.

Cases under investigation June 1	53
New cases	47
	100

Disposition of Cases.

Under treatment	9
Unable to locate	22
False address	22
Moved out of town — address unknown	5
Under investigation	42
	100
New cases reported by number	218

SUMMARY.

Cases under investigation June 1	61
New cases	64
	125
Unable to locate	27
False address	25
Moved out of town—address unknown	6
Under treatment	10
Under investigation	57
	125
Number of visits by venereal investigator	271

COMPLAINTS.

Placed under treatment	5
Unable to locate	4
Venereal Deaths Investigated	6

VITAL STATISTICS, JUNE, 1927.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING JUNE, 1927, WITH COMPARATIVE FIGURES FOR JUNE, 1926.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
All Causes:						
Total deaths	833	795	+38	12.60	12.12	+.48
Nonresidents deducted	680	633	+47	10.29	9.65	+.64
By Age:						
Under one year	136	111	+25	2.06	1.69	+.37
One year to four years, inclusive	36	39	—3	.54	.59	—.05
Sixty years and over	293	309	—16	4.43	4.71	—.28
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	48	43	+5	.73	.65	+.08
Arteriosclerosis	19	17	+2	.29	.25	+.03
Heart disease	145	152	—7	2.19	2.32	—.13
Nephritis, chronic	45	51	—6	.68	.78	—.10
Infant and Maternal Mortality:						
a. Total registered live births	1,473	1,823	—350	22.29	27.80	—5.51
b. Registered stillbirths	39	59	—20	.54	.90	—.36
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	25.79	31.35	—5.56
c. Deaths of mothers from causes incident to childbirth	15	6	+9	.23	.09	+.14
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	9.92	3.19	+6.73
Deaths of children in first year of life	136	111	+25	2.06	1.69	+.37
Deaths in first year per 1,000 live births,	.....	.....	.....	92.33	60.89	+31.44
Violence:						
Accidents	45	44	+1	.68	.67	+.01
Homicides	2	2	—	.03	.03	—
Suicides	4	7	—3	.06	.11	—.05
Miscellaneous:						
Alcoholism, acute or chronic	11	12	—1	.17	.18	—.01
Broncho-pneumonia	34	35	—1	.51	.53	—.02
Cancer	85	82	+3	1.29	1.25	+.04
Cirrhosis of the liver	13	3	+10	.20	.04	+.16
Diabetes mellitus	14	24	—10	.21	.36	—.15
Diarrheal diseases, children under two years of age	13	14	—1	.20	.21	—.01

		CASES AND DEATHS.					
		Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
		1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
Communicable Diseases:							
Anterior poliomyelitis	Cases	5	1	+4	.07	.015	+.055
	Deaths	2	1	+1	.03	.015	+.015
Cerebrospinal meningitis	Cases	1	3	—2	.015	.04	—.025
	Deaths	1	1	—	.015	.015	—
Diphtheria	Cases	134	77	+57	2.03	1.17	+.86
	Deaths	9	2	+7	.14	.03	+.11
Influenza	Cases	4	6	—2	.06	.09	—.03
	Deaths	—	2	—2	—	.03	—.03
Measles	Cases	579	385	+194	8.76	5.87	+2.89
	Deaths	6	3	+3	.09	.04	+.05
Pneumonia (lobar)	Cases	114	101	+13	1.72	1.54	+.18
	Deaths	41	23	+18	.62	.35	+.27
Scarlet fever	Cases	332	230	+102	5.02	3.51	+1.51
	Deaths	6	7	—1	.09	.11	—.03
Tuberculosis (pulmonary)	Cases	121	136	—15	1.83	2.07	—.24
	Deaths	51	47	+4	.77	.72	+.05
Tuberculosis (other forms)	Cases	39	47	+8	.59	.72	—.13
	Deaths	8	10	—2	.12	.15	—.03
Typhoid fever	Cases	2	10	—8	.03	.15	—.12
	Deaths	—	—	—	—	—	—
Whooping cough	Cases	58	229	—171	.88	3.49	—2.61
	Deaths	—	4	—4	—	.06	—.06

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1927 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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ACUTE ANTERIOR POLIOMYELITIS.

Infantile Paralysis.

The prevalence of this disease in Boston and vicinity at present makes its consideration of special importance.

Infantile paralysis, or acute anterior poliomyelitis, produces characteristic changes in the spinal cord and brain. These changes are indicative of an acute infection, as much so as the changes which take place in a corneal ulcer of the eye indicate an acute infection. From laboratory experiments considerable has apparently been learned regarding the nature of the infective agent in acute anterior poliomyelitis, but not as much as is to be desired.

Paralysis results from the changes in the parts of the spinal cord or brain where the nerves to the muscles originate, and as a consequence changes in the nerves themselves follow. The more extensive the changes in the spinal cord or brain, the more nerves are involved and the more extensive the paralysis. The changes in the spinal cord may be so limited as to lead only to a temporary partial loss of power in an arm or leg, or so extensive as to cause

complete paralysis. Deaths caused directly by the disease are usually due to the involvement of some part of the spinal cord or brain, whence nerves controlling the maintenance of some vital function arise, as, for example, the nerves controlling the muscles of respiration.

Indefinite symptoms of infection of the central nervous system may precede paralysis, but if so, they are seldom recognized by the family.

Acute anterior poliomyelitis occurs chiefly in young children. The great majority of cases of the disease, or at any rate of cases of the disease which become recognizable by reason of changes in the spinal cord and paralysis, are found in children under ten years old. No age, however, is immune and cases, even with extensive paralysis or resulting fatally, occur not infrequently in strong, healthy adults and in persons advanced in years. The preponderance of recognizable cases in the young, however, is sufficient to establish the fact that most adults must possess a strong resistance to attacks of the infective agent of the disease on the part of the central nervous system, even if not an absolute immunity to the disease. Experiments with blood serum would indicate the latter to be true. We cannot, however, say as yet that the disease may not occur in a person without giving rise to the manifestations of paralysis on which we are practically dependent for the clinical recognition of the disease. The examination of spinal fluid is usually a confirmatory procedure.

Acute anterior poliomyelitis has been transmitted experimentally in the laboratory to susceptible animals in various ways. The disease has developed in a presumably healthy monkey put in the same cage with a sick monkey and horse flies, but such experiments have been generally unsuccessful. Apparently, the disease may be transmitted by direct inoculation with the nasal serum of the sick, but it is not probable that this is the whole story of its usual manner of transmission.

Hypotheses as to the causation of infantile paralysis range from rat fleas to automobile exhaust, but we are still waiting for some Sir Patrick Manson to point out to us from the voluminous epidemiological data just how infantile paralysis really spreads in a community. The following are some of the facts which present themselves for consideration in this connection.

Sporadic cases of infantile paralysis occur in the temperate zones throughout the year and show a tendency to become more common in the late summer and early autumn. During the first decade of this century the disease manifested itself as serious epidemics, spreading westward from Europe over the world, much as cerebrospinal meningitis had done during the preceding decade. The

worst epidemic of infantile paralysis ever recorded occurred in New York City and vicinity in 1916 and during the same year serious local epidemics occurred both in North and South America and later in Australia. Since that year the disease has seemed to have lost its power to assume a serious epidemic character. In other words, infantile paralysis flared up and spread westward in epidemic form and then died out very much as cerebrospinal meningitis had done. Totally different from cerebrospinal meningitis, however, infantile paralysis does not have the characteristics of a direct contact disease. Even in the 1916 New York epidemic the most congested portions of that city remained relatively free from the disease.

Infantile paralysis seems primarily to appear as a disease of rural or suburban districts. The usual history of an urban epidemic is that an unusual number of cases are reported in the late spring or early summer and that they appear first in notable number in outlying or sparsely settled districts. In Boston, in such years, the early cases have appeared along the Neponset river on the south and in the outskirts of East Boston. In ordinary years cases appear promiscuously over the city, even at the time of the seasonal increase. The 1916 New York epidemic started in Brooklyn along the Gowanus Canal.

In Boston, in summers when the disease has been notably prevalent, cases have been reported with increasing frequency further and further in towards the center of the city. As the locations of new cases are plotted on the map of the city, they seem to follow linear directions which coincide curiously with routes of travel. Sooner or later, however, two local "nests" always developed within the city, one near the car barns in Jamaica Plain and the other in Brighton.

In the 1916 New York epidemic, the disease seemed to spread noticeably along the route of travel over the Williamsburg Bridge into Manhattan.

The disease appeared as a serious epidemic in Newark, N. J., soon after it had become so in New York, while the intervening territory remained comparatively free from the disease. The fact that travel between New York and Newark went through tunnels under this territory may be a sufficient explanation, but there was constant travel between this territory and New York as there was between New York and other localities which likewise escaped with relatively few cases.

More than one case of paralysis in a family has rarely been recorded in Boston and such occurrences were very unusual in the 1916 New York epidemic. It was authoritatively stated near the termination of the New York epidemic that not a single case had

occurred among the doctors or nurses in the hospitals, which were constantly jammed with patients, yet cases in the New York police force were so numerous as to suggest the possibility of some reason besides mere chance. No outbreak occurred in children's institutions in New York during the epidemic. In fact, it was stated that not a single case developed in an inmate of any children's institution except in children recently admitted, an occurrence which was quite common.

On the other hand, cases of anterior poliomyelitis occurred in Italy in 1916 under circumstances which point almost conclusively to the bringing to Italy of the infective agent with travel or commerce from New York.

Investigations made under the writer's direction in Boston have generally failed to bring out a history of any symptoms of sickness among other children in a household at or about the same time as a case of paralysis has occurred. Instances have, however, come to the writer's personal attention elsewhere, in which two or more, and in one instance five children in a family exhibited what appeared to be an acute digestive disturbance, which rapidly disappeared, but within twenty-four hours thereafter one child was found to have paralysis. The writer also recalls a report of what appeared to be acute food poisoning affecting over fifty boys in a boys' camp and which was followed by typical poliomyelitis in three or four boys.

Epidemics which have occurred in this climate have reached their peak soon after the first of October and have been practically over by the first of November. The coincidence of the rise of poliomyelitis epidemics with the annual increase in abundance of insect life, the supposed relation of insects to certain forms of infective paralysis in animals and other circumstantial evidence, tends to give support to the hypothesis that some insect is concerned with the epidemic spread of anterior poliomyelitis in a community. Claims of direct experimental evidence that one fly or another is capable indirectly of transmitting the disease has been made, but such claims have not been generally regarded as established. Evidence that food may be involved in the transmission of the infective agent is stronger and in a few instances the responsibility of raw milk seems to have been reasonably well fixed by circumstantial evidence. It can, however, be easily shown that the spread of poliomyelitis cannot be due entirely to milk and that while it may appear most probable that the infective agent of the disease is usually introduced into the body in connection with food it is also quite possible that some insect may play a part in contaminating the food.

In view of the foregoing, it is evident that measures for the prevention of anterior poliomyelitis cannot as yet rest on a rational basis, either with respect to the checking of epidemics or the matter of personal protection.

As to measures for community protection against epidemics, it may be observed that the New Jersey towns which adopted shot gun methods in 1916 for excluding everybody from New York during the epidemic did not suffer from the disease. The same may also be said of some New Jersey towns which did not adopt such methods.

With the idea of checking the spread of the disease in a community it is customary to quarantine cases which have been recognized as anterior poliomyelitis. A quarantine period of two or three weeks from the onset of paralysis is ordinarily prescribed. How much good such a measure of precaution may be able to accomplish is open to question. Unless anterior poliomyelitis be different from any other acute infectious disease about which we know, the infective agent must be present in the body before symptoms appear, and if the disease be directly transmissible from person to person it is therefore presumably transmissible before paralysis is recognizable. We therefore can no more expect to control the spread of anterior poliomyelitis by quarantining cases after paralysis occurs than to control the spread of measles or scarlet fever by merely quarantining cases after the rash comes out.

No one can say that the throat or nasal secretions may not be indirectly, if not directly, a source of danger and it is customary to prescribe that they shall be safeguarded, collected, disinfected, or destroyed as in a case of scarlet fever. If the secretions in poliomyelitis be presumed to be dangerous there is apparently no reason why the same precautions with respect to the possibly contaminated hands of the patient or attendants and eating and drinking utensils should not be taken as are prescribed in scarlet fever. While we are still guessing regarding the manner of transmission of this disease it would seem that precautions with respect to intestinal excretions might excusably be taken as it is customary to prescribe in typhoid fever.

It is to be noted also that before we can form any estimate of the value of a quarantine procedure in dealing with this disease, we must know whether the involvement of the central nervous system by the infective agent be a characteristic of the disease or an exceptional manifestation or complication of what may be a comparatively common infection. If the latter, we have a "carrier problem" of the first magnitude.

With respect to personal protection of the individual we are as much in the dark as in the matter of community control of infantile paralysis. So far as an adult is concerned, there is no more justifica-

tion for fussing about the danger from anterior poliomyelitis than about other dangers to life or limb to which one is inevitably exposed. With respect to children under twelve or fifteen years old, however, it seems entirely justifiable to make a reasonable effort to keep them away from localities where the disease is known to be prevalent. The futility of attempts to prevent exposure within such localities is well indicated by the following:

In the 1916 New York epidemic, suburban and sparsely settled parts of Staten Island were extremely hard hit. Of the first three cases reported on Staten Island one was in a child who had been living on a large estate in the southern part of the island in a peculiarly isolated condition for many weeks and apparently without possible chance of exposure to persons who might have been in contact with the disease. A similar case occurred in a child on the Fort Hamilton military reservation where for weeks special precautions had been taken to prevent contact with other persons. No other cases occurred on the reservation.

In the possibility of finding protection through precautions with respect to food we are beginning to see glimmers of hope. We are justified at present in saying that possible danger of infantile paralysis is another reason why unpasteurized milk should be avoided. We may even go further and say that when infantile paralysis is prevalent, it would be justifiable to pasteurize the milk immediately before serving, as a precaution against possible contamination after delivery in house. As already stated, milk cannot be the only source of infantile paralysis and the same precautions with respect to milk or ice cream might consistently be extended to the sterilization before eating, at least, of such other articles of food as are known to be favorable for the growth of pathogenic organisms, as, for example, puddings, custards, chowders, stews, meats and fish. There are some reasons for believing that there may be justification for avoiding lettuce, celery and other uncooked vegetables when poliomyelitis is prevalent.

With infantile paralysis, as in other instances, so-called preventive medicine has been outdistanced by the development of more effective methods of medical treatment. If premonitory nervous symptoms be recognized the administration of "convalescent serum" may possibly avert paralysis. Success in the restoration of functions in disabled limbs is now being accomplished to an extent not deemed possible twenty years ago. It is now also recognized that the quieter the patient is kept in the early stage of paralysis the better the chances for escaping permanent disability. Limbs should be maintained in a position tending to counteract distortion.

MOTHERS' CLASSES.

A series of mothers' classes in conjunction with the roof classes have been organized by the Nutrition Supervisor, and are being conducted in the North End, South End and East Boston Health Units.

The attendance and interest shown by the mothers at the meetings already held seem to prove that these classes will help to gain the wholehearted co-operation and genuine interest of the mothers for the future application of this carefully supervised program as regards the child's physical improvement.

This new feature is to stress the fundamental importance of the home responsibility in this constructive health plan and to show that unless adequate measures are taken in the home to avoid all obstacles that may affect the child's progress, his condition will not be permanently benefited.

Special attention is focused upon the food and food habits of each child. A chart for each child has been made indicating the food intake of the child for two consecutive days previous to his admission on the roof. By this food record a sufficiently accurate indication of the child's customary diet and habits is obtained. Such an individual record is particularly valuable, inasmuch as the individual food errors and deficiencies of the child may be pointed out to the mother thereby obtaining her keener interest. This food chart gives a general idea of the kind of food indulged in, how much is taken, the likes and dislikes of the child, mistaken ideas as to food value, food deficiencies and faulty food habits.

A study of the food charts of these children shows that the most common errors in their dietary are:

(1.) Insufficient daily amount of milk.
(2.) Omission of cereal.
(3.) Use of tea and coffee.
(4.) Irregular meal time.
(5.) Sweets between meals.

It is our aim to teach the normal diet, to correct the individual food errors, and suggest to the mother of each child with a capricious appetite adaptations of food to the child's taste without lessening the food value.

The so-called balanced diet will be elucidated in simplest terms expressing the amount of food required each day to supply sufficient protein of kind best suited for growth and maintenence, suitable amount of energy-producing foods, sufficient amount of mineral substances to regulate body processes, sufficient amount of ballast and adequate supply of vitamines.

Instruction in attractive preparations and ingenuity in serving will be given, stressing the point that good combination promotes good digestion.

A copy of the roof menu for the week will be given to the mothers at each meeting. A height and weight chart is kept in graphic form for each child so that the mother may follow the significant weight curve from week to week. This offers competition among mothers as well as the children.

Human economy will be emphasized at each meeting, thus stressing the importance of "Buying health instead of sickness when buying food." The cheapest food is that which affords the greatest amount of nutriment at the least cost.

Outline of Classes.

General Discussion in Simple Terms of Following.

Lesson I.— Introduction.

1. Purpose of class.
2. Roof program.
3. Human economy — buy health instead of sickness when buying food.

Lesson II.— Milk.

1. Necessary daily amount and its importance to growing child.
2. Ways of serving milk to give child one quart daily, *i. e.:*
   - (*a.*) On cereal.
   - (*b.*) Puddings.
   - (*c.*) Chowder.
   - (*d.*) Soup.
   - (*e.*) Cocoa-malted milk, etc.
   - (*f.*) Eggnog.
3. Demonstration — of some nutritious and attractive dishes of milk.

Lesson III.— Egg.

1. Importance to growing child.
2. How often served and why.
3. Ways of serving:
   - (*a.*) Omelet.
   - (*b.*) Poached.
   - (*c.*) Soft-boiled.
   - (*d.*) Creamed.
   - (*e.*) Eggnog.
4. Demonstration — ways of serving eggs for luncheon:
   - (*a.*) Creamed eggs.

Lesson IV.— Meat.

1. Value of meat.
2. How often to be served and why.
3. Type of meat best for children:
   - (*a.*) Value of particular kind.
   - (*b.*) Why.

4. Demonstration — ways of serving liver:
   (*a.*) Liver-nog.
   (*b.*) Broiled liver with bacon.
   (*c.*) Broiled liver with rice.

Lesson V. — Fish.

1. Value of fish.
2. How often to be served and why.
3. Type of fish best for children:
   (*a.*) Value of particular kind.
   (*b.*) Why.
4. Demonstration — fish chowder.

Lesson VI.— Cereal.

1. Value of daily use and why.
2. Difference in value of refined and coarse cereal.
3. Discussion of time table for cooking cereals:
   (*a.*) When to use raw and when to use cooked cereals.
4. Demonstration — palatable way of using left-over cooked cereal:
   (*a.*) Oatmeal cookies.
   (*b.*) Oatmeal molded with dates and figs.

Lesson VII.— Bread.

1. White bread.
2. Dark bread.
3. Demonstration — gingerbread.
   (*a.*) Demonstration — bread pudding.

Lesson VIII.— Vegetables.

1. Green and otherwise.
2. Danger of loss of food value in cooking.
3. Demonstration — vegetable dinner.

Lesson IX.— Fruit.

1. Raw.
2. Dried.
3. Cooked.
4. Fruit as a breakfast dish.
5. Fruit as a dessert.
6. Substitute for candy.
7. Demonstration — preparation of fruit dessert.

Lesson X.

Demonstration — a balanced breakfast.

Lesson XI.— Lunch.

1. Attractive hot lunches.
2. Demonstration — a balanced dinner.

Lesson XII.

1. Demonstration — a balanced supper.

IDENTIFYING TYPHOID CARRIERS AMONG FOOD HANDLERS.

All food handlers suspected of having had typhoid fever in Montreal, or anywhere else, should be examined to discover whether or not they are typhoid carriers. This announcement was made by Dr. Francis X. Mahoney, Commissioner of Health of Boston, and Dr. George H. Bigelow, State Commissioner of Public Health, who are both preparing their laboratories to meet the demands for such examinations. Recently the United States Public Health Service issued a warning to the country in general, but with particular reference to the summer resorts in New England, where cooks, waiters, milkmen and other food handlers from the recently typhoid-ridden city of Montreal may be employed. Employers were urged to have all such persons suspected of having had typhoid fever examined, and it was implied that local health authorities would furnish the service necessary. This was perfectly sound advice but it was also a large order. Obviously, anyone infected elsewhere than in Montreal is just as dangerous, if he be a carrier, as though the infection occurred in the unhappy Canadian city, as was tragically demonstrated four times in this state last winter. The reason for featuring Montreal was that of the over 4,000 cases recently occurring there, more than 200 probably still carry the germs in their intestines or bladder, and are therefore capable of spreading the disease. It is highly unlikely, however strenuously the Montreal authorities have tried, that all the carriers have been located and their movements controlled. Thus we cannot expect to be informed when they come to Boston or elsewhere in Massachusetts and perhaps obtain employment handling food. We must identify them ourselves.

It would, however, be an impossible situation if as a result of this warning the employers of all food handlers should become hysterical and submit specimens from all their staff who have even been to Montreal, or, in fact, whether they had even been there or not. It is estimated that there are from one half to one million persons regularly or intermittently employed in handling food in this state if we include the producers, packers, shippers, wholesalers, retailers, cooks and servers. Since the entire cost of each examination probably averages well over fifty cents a single examination of stool and urine of all these persons would cost well over half a million dollars. But as all those having a suspicious history of disease should have at least two of each such examinations made unless the first is positive, this is evidently a conservative figure. Obviously, the public laboratories of this state cannot suddenly assume such an enormous burden without radical expansion of space, equipment, personnel and budget. This was the sort of

administrative problem that was faced daily during the war when money was no object. But there is no prospect of any such expansion today in time to be of any service in protecting the people of this state this summer. Nor would it be a sound expenditure of such an enormous sum of money. A very careful and far less expensive selection should be made of those on whom examinations for typhoid carriers are to be requested.

All food handlers should be questioned in regard to their having had typhoid fever or any vague illness of considerable duration. Since the infection may have occurred many years ago and since in a number of instances the symptoms are far from typical, a well-trained physician can do this more effectively than a layman. The physician's fee is well spent if it saves the employer from the financial cataclysm which always results from tracing typhoid fever to food handled or served by him. When the suspicious individuals have been identified do not, above all things, summarily discharge them. It would be catastrophic were it whispered about this state that in order to obtain work handling food one must never admit ever having had a fever of considerable duration. Should ruthless methods be adopted persons in need of work might well develop a less exacting conscience. Our most effective protection against typhoid carriers is "facts" from food handlers with an inelastic memory.

Do not expect the doctor by any physical examination to cull out the "carriers" from the suspects. He can identify certain of the common communicable diseases such as diphtheria, scarlet fever, septic sore throat, tuberculosis and typhoid fever, which cases should under no circumstances come in contact with food. But what we are talking about, the carrying of the typhoid bacilli, is not a disease but a condition. Usually the unfortunate individual "never felt better" and may be "insulted" at the suggestion that he is a "carrier. Go to your local health officials. If, like Boston and other of our larger cities, they have a laboratory service they will make the necessary examinations for you. If not, they will arrange for the examinations through the state laboratory. In the latter case, the state district health officers can assist in the arrangements.

For those suspects having at least two negative stool and urine specimens the story is ended. For those unfortunate enough to carry the germs, all contacts with food must stop at once, and let us all get our heads together to work out in each individual case the best compromise which will allow the individual to live profitably and happily without exposing those of us who must eat to live, whether we be permanent residents of the state or that nomadic

class of profitable and welcome summer visitors. Such a compromise has been worked out in many instances although the last Legislature refused any assistance.

VITAL STATISTICS.

For the First Six Months of 1927 Compared with the Same Period of the Year 1926.

The first six months of the current year shows an improvement over the corresponding period of the year 1926 with respect to the matter of public health in Boston as reflected in the morbidity and mortality tables which are given below and which cover these two periods of time. The total deaths for the present year (six-month period) are nearly six hundred less than for the corresponding period in 1926. A study of the following comments and of the tables will show under which causes of death and age periods the major portion of this reduction was accomplished.

In drawing deductions from these tables it must be borne in mind that figures for 1927 are not yet final but are close enough to what will be the final figures in each case to permit of accurate study for the six-month periods. Except in the total which calls for "nonresidents deducted" the figures given herewith are for residents and nonresidents together or in other words include all deaths within the city limits of Boston.

The total deaths for the first six months of 1927 were 5,916, or 575 less than the total for the corresponding period in 1926. The death rate for the first six months of 1927 was 14.92 as compared with 16.49 during 1926, a decrease of 1.57 per 1,000 population. There were 1,128 nonresident deaths for the first six months of 1927 or 19.06 per cent of the total; this is compared with 1,129 nonresidents for 1926 or 17.4 per cent of the total. The death rate for 1927 with nonresidents deducted was 12.07 as against 13.62 for actual residents in 1926. This is an actual decrease of 574 deaths for residents of Boston taken alone.

The deaths under one year decreased by only five and the infant death problem cannot be said to have shown much improvement over last year. Deaths in age periods from one to four, inclusive, declined by 126 while deaths of persons sixty years and over decreased by 282. Deaths from so-called degenerative diseases, cerebral hemorrhage, arterio sclerosis, heart disease and nephritis, totaled 1,981 for the six months of 1927 as compared with 2,205 for 1926, showing a decrease of 224 deaths and accounting for 39 per cent of the total decrease of 575 deaths for 1927.

The total live deaths during the 1927 period, 9,202, showed an increase of 350, producing a birth rate of 23.21 and when com-

pared with a total of 763 infant deaths produced an infant mortality rate of 82.92 as compared with 8,852 live births and 768 infant deaths in the year 1926 when the infant mortality rate was 86.76 or a decrease in favor of 1927 of 3.84 per 1,000 live births.

An increase of 13 deaths was shown in the deaths of mothers from causes incident to pregnancy, the total being 82 for 1927 as against 69 for 1926. The death rate for mothers per 1,000 deliveries was 8.64 for 1927 as compared with 7.55 for 1926.

Deaths from accidents, 290, showed an increase in 1927 of 21; the total for 1926 was 269. There was an increase shown in deaths due to motor vehicle accidents which accounts for about 50 per cent of this increase.

Deaths from homicides, 9 in 1927 as against 17 in 1926, and suicides, 39 in 1927 as against 51 in 1926, both showed substantial decreases.

Deaths due to primary alcoholism decreased from 93 in 1926 to 70 in 1927. A large saving in lives was shown in the reduction in deaths due to broncho pneumonia, 353 in 1927 as compared with 452 in 1926, or a diminution of 99.

Cancer deaths showed an increase of 18 for the six-month period of 1927; and cirrhosis of the liver for the same period increased by 10.

Diabetes mellitus deaths decreased by 19 for the 1927 period and a decrease of five deaths was shown in diarrhea and enteritis in children under two years for the same period.

Among the more prevalent communicable diseases, increases were shown during 1927 in the reported *cases* of diphtheria, 337; and scarlet fever, 1,184. An increase in the reported deaths for the same period was shown in scarlet fever, which increased by 11, being 37 in 1927 as against 26 in 1926, and epidemic meningitis, which increased by 4.

Cases reported during 1927 which show decreases are as follows: Influenza, 220; measles, 1,860; lobar pneumonia, 285; pulmonary tuberculosis, 71; tuberculosis other than pulmonary, 51, and whooping cough, 2,327. Deaths from communicable diseases reported during the 1927 period which showed decreases were: Influenza, 43; measles, 32; lobar pneumonia, 77; pulmonary tuberculosis, 59, and whooping cough, 79.

The above is a résumé of the principal morbidity and mortality statistics and it is hoped that the last half of the present year may show even further savings in human life to the end that the final total in deaths from all causes may be at least 1,000 less than during the year 1926.

RULES OF HYGIENE.

1. Ventilate every room you occupy.
2. Wear loose, porous clothing suited to season, weather, and occupation.
3. If you are an indoor worker, be sure to get recreation outdoors.
4. Sleep in fresh air always; in the open if you can.
5. Hold a handkerchief before your mouth and nose when you cough or sneeze and insist that others do so too.
6. Always wash the hands before eating.
7. Do not overeat. This applies especially to meats and eggs.
8. Eat some hard and some bulky foods; some fruits.
9. Eat slowly — chew thoroughly.
10. Drink sufficient water daily.
11. Evacuate thoroughly, regularly.
12. Stand, sit, and walk erect.
13. Do not allow poisons and infections to enter the body.
14. Keep the teeth, gums, and tongue clean.
15. Work, play, rest, and sleep in moderation.
16. Keep serene. Worry is the foe of health. Cultivate the companionship of your fellow men.
17. Avoid self drugging. Beware the plausible humbug of the patent medicine faker.
18. Have your doctor examine you carefully once a year. Also consult your dentist at regular intervals.— (U. S. P. H. S.)

SURVEY OF THE QUALITY OF BOSTON MARKET MILK.

The following is the result of a survey made of market milk sold in Boston by dealers and chain stores during July, 1927. In Massachusetts the statute law requires a minimum of 12 per cent solids and 3.35 per cent butter fat.

Name of Dealer.	Solids.	Fat.	Bacteria. Thousands in One Cubic Centimeter
	Per Cent.	Per Cent.	
Alden Brothers	12.72	4.00	60
Allen, Fred H	12.25	3.63	221
Antetomasso, Peter	12.68	4.05	12
Barron, C. W	13.90	4.90	10
Bergmann, J. H	12.59	3.95	148
Bolio, William	12.24	3.55	80
Brandley, F. J. & P. J	12.16	3.70	40
Casey, James	12.78	3.90	40
Cashin, James	12.33	3.65	627
Cedar Hill	12.51	3.87	14
Chapin, George	12.30	3.81	150
Childs Brothers	12.38	3.73	63
Clapp, Frank L	12.93	4.05	190
Clark, Levi	12.02	3.50	18
Coleman, David	11.74	3.63	412
Converse, M. M	12.56	3.85	230
Corkery, J. J	12.23	3.70	360
Cosgrove, Martin S	12.39	3.65	61
Cummings, F. S	12.16	3.66	17
Cunningham, Paul	12.14	3.61	191
Cusick, W. H	12.60	3.68	32
Dean, Louis W	12.98	4.10	883
Deerfoot Farm	12.53	3.88	64
Denehy, Timothy	12.19	3.68	165
Driscoll, William B., Company	12.43	3.77	28
Duggan Brothers	12.58	3.83	16
Edgerly, Frank S	12.06	3.70	80
Elm Spring Farm Company	12.59	3.95	22
Ferguson, M. D	12.36	3.85	25
Furbush, A. J	13.77	4.30	24
Garfield, Mason	13.91	4.90	12
Garvin, C. E	13.45	4.30	17
Giroux, J. E. & H. J	12.56	3.90	78
Griffin, Joseph L	12.60	3.78	21

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Gushee, C. W.	12.10	3.48	53
Herlihy Brothers	12.35	3.83	168
Hickey, M. J.	12.27	3.80	16
Holden, John E.	12.29	3.72	327
Hood, H. P., & Son	12.01	3.91	20
Hutchinson, F. T.	12.29	3.68	120
Jones, William T., Company	12.68	4.05	30
Kendall Brothers	12.17	3.63	49
Kingston, Samuel	12.71	3.93	47
Knapp, George J.	12.27	3.65	154
Lang Brothers	12.42	3.85	18
Larson, Charles	12.25	3.58	19
Lincoln Farms	12.16	4.10	246
Lyndonville Creamery	12.62	3.95	44
Manning, Peter	12.35	3.69	264
Maple Farm Milk Company	12.38	3.70	781
McAdams, J. F.	12.82	4.05	20
McKernan, James	12.23	3.75	14
Millwood Farms	12.24	3.73	80
Munchback, George	12.56	3.78	37
Newton & Pope	12.86	4.10	10
Noble, William F., & Co	12.58	3.90	56
Robinson, A. J.	12.56	3.88	21
Schuster, Adam	12.45	3.72	31
Seven Oaks	12.30	3.80	26
Shick, Jacob	12.56	3.85	106
Somerset Farms	12.68	4.00	23
Sterling Farms Milk	12.50	3.80	44
Stone, H. L.	12.34	3.80	13
Stuart, W. E.	12.47	3.80	15
Swett, Warren	11.78	3.43	800
Turner Center System	12.45	3.81	96
United Farmers Co-operative Creamery Company	12.71	4.13	36
Vartanian, S.	12.43	3.95	55
Vartanian, K.	12.50	4.00	40
Walker-Gordon	12.54	3.98	10
Weiller, E., & Sons	12.32	3.73	99
Werner Company	12.29	3.74	73
Westwood Farms	12.57	3.87	19

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
White Brothers	12.46	3.85	30
Whiting Milk Companies	12.29	3.80	108
Whittemore, W. D	12.65	3.73	25
Wiswall, George A	12.46	3.70	10
Woodland, Charles L	12.31	3.93	183

CHAIN STORE MILK.

Name of Dealer.	Supplied by.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
		Per Cent.	Per Cent.	
The Great Atlantic & Pacific Tea Company.	Hood & Sons Company	12.40	3.85	49
The Cloverdale Company	Turner Center System, Inc.	12.31	3.72	88
John T. Connor Company	Bellows Falls Co-operative Creamery Company.	12.72	3.90	26
Economy Grocery Stores	Whiting Milk Companies	12.19	3.70	27
The Ginter Company	United Farmers	12.78	4.00	23
Morgan Brothers Company	Morgan Brothers	12.39	3.78	56
O'Keefe's, Inc	Bellows Falls Co-operative Creamery Company.	12.81	4.00	23
Winer, M	Hyman Winer	12.46	3.90	44

CONDEMNATION OF FRANKFURTS

While an inspector attached to the Food Division was inspecting a frankfurt and sausage plant in the market district he found eighty pounds of frankfurts which had been returned from dealers, and which were slimy and unfit for food.

Further inspection disclosed fifteen tierces of boned meats intended for use in frankfurts. This meat consisted of shin beef, pork trimmings, veal and rinds. Examination of this meat showed it to be unfit for food. The lot weighed between 5,500 and 6,000 pounds.

It was found that this meat had been received from wholesalers at various times during the month, and the shortest period of time that any of it has been in full possession was at least a week. The first meat was put down in pickle on July 6, 1927. The temperature was excessively high during the preceding ten days.

Three facts operated to cause the decomposition of this meat. First: Improper refrigeration, allowing too high a temperature in the ice box. At one time the temperature was 45 degrees Fahrenheit.

Second: Insufficient, or under salting, and not evenly distributing salt throughout the meat. Third: Placing meat in dirty, unclean barrels, which had not been steamed out and which had communicated sourness to the meat. The meat in the center of all of the barrels was "gassy" showing that active decomposition was taking place.

The importance of this seizure is shown in the fact that this meat was intended to be used for frankfurts, and the meat could be spiced and treated in such a manner that the odor could be detected only by an expert, while all the time the frankfurts were potentially dangerous and liable to cause serious food poisoning.

All of the above meat has been condemned for food purposes, denatured, and will be taken to a rendering plant.

The Food Division has to be especially vigilant during the heated period to detect decomposition in meats and meat food products.

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING JULY, 1927.

Classification.	Number.	Percentage.
After death	8	14.04
Seven days or less	3	5.26
Eight to fourteen days, inclusive	2	3.51
Fifteen to twenty-one days, inclusive	1	1.75
Twenty-two to thirty-one days, inclusive	3	5.26
Within First Month. (Total)	17	29.82
Within second month	6	10.53
Within third month	3	5.26
Within fourth month	3	5.26
Within fifth month	2	3.51
Within sixth month	1	1.75
Within seventh month	2	3.51
Within eighth month	3	5.26
Within ninth month	1	1.75
Within tenth month	1	1.75
Within eleventh month	2	3.51
Within twelfth month	—	—
Within First Year Preceding Death. (Total)	41	71.91
Within second year	5	8.77
Within third year	4	7.02
More than three years	7	12.28
Grand totals	57	99.98

THE MEETING OF THE MASSACHUSETTS ASSOCIATION OF BOARDS OF HEALTH.

As a part of the informative discussion which has been undertaken by the Massachusetts Department of Public Health, in the matter of proper regulations governing the pasteurization of milk, the Massachusetts Association of Boards of Health devoted its summer meeting, that of Thursday, July 21, to a co-operative educational effort. The general subject of the meeting was "Positive Pasteurization"; the speakers were national authorities, George W. Putnam, Chief of the Bureau of Dairy Products, Chicago Health Department, and Leslie C. Frank of the United States Public Health Service; the place was the charming estate of the Worcester Country Club just within the city limits toward West Boylston and the company assembled included the administrative and health officers of Massachusetts cities and towns to the number of nearly one hundred.

After a brief word of welcome by Mr. Micheal J. O'Hara, Mayor of Worcester, Mr. Putnam took the floor, followed by Mr. Frank. The paper of Mr. Putnam dealt with the apparatus for pasteurizing, and the illustrations on the screen outlined the principal practical defects in each of the various types of machines, and their remedies. From the point of view that pasteurization requires the heating of the milk to a given definite temperature and the retention of it at that temperature for a definite length of time, it must be realized that some of the appliances in use fail to live up to the requirements and permit milk which has not been properly heated or properly held to pass into the "pasteurized" body.

In general, in a holding outfit, these failures may be due to dead ends, where the milk remains comparatively cold, yet is drawn off with the general body of milk; cold outlets, which keep some of the milk comparatively cool; leaky outlets, which permit milk that has not been properly heated to pass round the valves; and foam and splash, the former rising above the surface of the heated milk into air that may be lower in temperature, and the latter bringing milk into contact with a comparatively cold cover to the tank.

For each kind of failure there has been devised some remedy. Dead ends may be eliminated once one has realized that they are there; the same is true of cold outlets; leaky outlets may be avoided by modern valves which pass any leaked material to receptacles other than the body of the milk. Foam may be due to the separator or to causes in the flow. The first kind may be eliminated by better separators, and if it persists from flow or other cause, the foam may be pasteurized by having the air above the milk into which it projects

of a pasteurizing temperature. For this steam may be used and without detriment to the product. Splash is usually caused by defective flow pipes, and should not be difficult to remedy.

Ineffective pasteurization may be due to defective thermometers, which do not give true readings. This may be avoided by using a mercury indicating thermometer in each vat.

Passing to other methods of pasteurization, Mr. Putnam stated that the flash method has been used, but has been rejected by health officers because of unsatisfactory results. This subjects the milk to a high temperature for a very short time.

Electrical processes for pasteurizing milk seem still to be in an experimental stage. Good authorities differ here and only one state has accepted the electrical process as a legal procedure.

Between pasteurization and bottling there may be a period of possible exposure of the milk to dust or to fly contamination. This may be avoided by shields or by the use of special rooms closed to other purposes.

In closing, the speaker emphasized the fact that the defects that have been evolved in developing processes of pasteurization must not be permitted to belittle the importance of process as a safeguard to a most important food supply. Mr. Putnam, formerly state engineer in a Mississippi Valley commonwealth, is the official who has been advisory to Doctor Bundensen, health commissioner of Chicago, in the recent radical changes in milk regulations in that city.

In beginning his address, Mr. Frank plainly put the case of safeguarding milk as he views it from three standpoints, as the father of a family of children, as a former proprietor of a dairy and as a one-time health officer of Dallas, Texas. His question was constantly, "As a dairyman who has been a health officer, and in whom consumers have additional confidence for this reason, what is the proper action to safeguard the people?" He said first in effect, that it might be a serious question in the minds of many whether in view of an unfortunate outbreak of milk-borne disease, like the recent one at Montreal, we are right in depending on pasteurization.

"Be a dairyman," said Mr. Frank, "scrutinize disease, scrutinize prevention,— what conditions will help towards safety?" He noted that while there are quite a number of diseases that may be conveyed by milk, there would be time to consider only three, tuberculosis typhoid fever, and septic sore throat.

It is obvious from our present knowledge that the testing of cattle is very important. "This done," said the speaker, "can the dairyman assert to the consumer that the supply is safe?" The herd is tested, the reactors are taken out and in some months or a year, with a subsequent test, a reactor is found in the herd. Who can say

how long that cow has been a potential menace to the raw milk supply of that dairyman? The answer here is that pasteurization provides the only known security.

The dairyman finds out that of the outbreaks due to milk a large majority, about three quarters, are typhoid. "What is he to do?" There is the testing for carriers. Alabama has a new technique, by Haven, which can do good work. In this state it has been determined that three out of every hundred dairymen are carriers. Possibly this a fair rating of the population as a whole. Then it is to be considered that carriers may be intermittent and that to detect them is a costly process. With raw milk, can the dairyman say, "We are safe?"

Then there is septic sore throat. "What can be done?" Here the speaker asserted that he did not know. It is an explosive malady, and no precautions that are available will ensure the safety of raw milk.

Incidental to his discussion the speaker drew upon his own experiences as a dairyman, who, with the experience of a health officer, was trying to carry on a safe dairy. One day the records showed about five hundred gallons that had not been properly pasteurized. The foreman's answer was that an institution made a call for this milk to be delivered at once. "If you can not furnish it, we shall try your competitor," was the accompanying admonition. What else could be done but deliver it "as is," if the trade was to be retained? One day a milker reported asking leave on account of dysentry. In reply to questions it was found that he was ill the day before, but had felt forced to milk because of short-handedness in the milking squad.

"With this experience," said Mr. Frank, "I said, 'Pasteurization for my babies and my customers.' "

The speaker was strong in his assertion that there is no real basis for claiming that raw milk is safe. But, can the public health officer require that all milk shall be pasteurized? Here one comes upon the difficulty that no official can proceed faster that the speed of education of his people. Comparatively few communities as yet will support complete pasteurization of the milk supply. Under the circumstances it seems most advisable to grade the milk, and the speaker suggested grades A, B and C, all pasteurized, but of different standards, so that consumers may know what they are getting. In the production of milk as in any other process, slips will occur, and the matter must be treated with a margin of safety.

Dr. George H. Bigelow, State Commissioner of Public Health, joined in the discussion with the presentation of various Massachusetts problems. (*Boston Medical and Surgical Journal.*) Many new applications were received for membership in the association

whose officers are John J. McGrath, Salem, president; Dr. M. Victor Safford, Boston, vice-president; Dr. J. U. Paquin, Fall River, second vice-president; Dr. Frances George Curtis, Newton, treasurer; Stephen L. Maloney, Boston, secretary.

AMERICAN PUBLIC HEALTH ASSOCIATION ANNUAL MEETING, CINCINNATI, OCTOBER 17-21.

When will the peak of heart disease mortality be reached? What can we do about measles? How about the common cold? Has prohibition promoted the public health? Are we giving attention to the nutrition of the industrial workers? Why is conservation of sight a public health problem? Is food poisoning a material factor in shortening the life span? How far have we gone and how far are we going in public health education? What is the place of the government in public health administration?

These and many other pertinent questions pertaining to the health of the people will be discussed at the Fifty-Sixth Annual Meeting of the American Public Health Association at Cincinnati, Ohio, October 17–21, with headquarters at Hotel Gibson.

This year the annual meeting will open officially at noon on Monday and close Friday noon, which gives opportunity for one more session than in previous years. The Ohio Society of Sanitarians and the Ohio Health Commissioners will hold their annual meetings in conjunction with the American Public Health Association in Cincinnati.

Each of the nine sections of the association, laboratory, health officers, vital statistics, public health engineering, industrial hygiene, food and drugs, child hygiene, public health education, and public health nursing — will hold individual section meetings. In some instances two or more sections will combine for joint meetings. The topic for discussion at the Forum Session is "Has Prohibition Promoted the Public Health," C. E. A. Winslow, Dr. P. H., Yale University, presiding. One session will be given to the discussion of mental hygiene from the angle of the home, the school, and the industrial field. An analysis will be made by a special committee on the health programs in operation in normal schools and colleges and will be supplemented by constructive suggestions.

Dr. Herman N. Bundesen, Health Commissioner of Chicago, Dr. William H. Park, of the New York City Health Department Laboratories, Dr. Clarence E. Smith of the United States Public Health Service and C. W. Larson of the United States Department of Agriculture are among the specialists asked to give the most recent developments in the sanitary production and handling of milk.

Several luncheon and dinner meetings will be held by sections, including laboratory, public health engineering, industrial hygiene, food and drugs, and public health education. Besides a special session on venereal disease control, a round table luncheon conference has been scheduled.

Trips to points of interest in and around Cincinnati have been arranged by the local committee. An attractive program for the entertainment of the women guests and delegates at the Annual Meeting has been provided by the Cincinnati Committee.

Railroads will grant the usual reduced rates to members and Fellows of the Association going to Cincinnati for the meeting. Transportation certificates will be mailed to members of the American Public Health Association, September 1. Application for reduced fare certificates and for information should be made to Homer N. Calver, Executive Secretary, American Public Health Association, 370 Seventh avenue, New York City.

SUMMARY OF THE WORK, JULY 1, 1927.

BUREAU OF ADMINISTRATION.

Prosecutions ordered	7	Personnel:	
Legal notices	220	Resignations	2
Lying-in Hospital approved	1	Salaries increased	2
Proposals accepted	4	Appointments, permanent	5
Regulation promulgated	1	Appointment, provisional	1
		Appointments, temporary	14

LICENSES, PERMITS, ETC., ISSUED.

Beverage licenses approved	43	Milk	192
Beverage licenses disapproved	2	Garbage transportation	1
Burial permits	879	Garbage transportation, refused,	1
Denatured alcohol	3	Pedlers	124
Hen licenses	35	Undertaker	1
Manicure-massage	172		

MEDICAL DIVISION.

Visits:		Cases brought to Boston for treatment	67
By medical inspectors	736	Deaths investigated	3
By investigators	168		

NURSING SERVICE.

Homes Visited		10,503
Child Hygiene:		
New cases visited	1,357	
Old cases revisited	5,354	
Total child hygiene visits *		6,711

* Includes 112 wrong addresses; 878 not seen; 990 absent visits.

COMMUNICABLE DISEASES:		
New cases visited	1,129	
Old cases revisited	5,098	
Total communicable disease visits *		6,227
TUBERCULOSIS VISITS:		
Visits to positive cases	1,418	
Visits to contacts	618	
Visits to suspects	132	
Total tuberculosis visits		2,168
MISCELLANEOUS VISITS:		
Infant death investigations		76
Maternal death investigations		2
Patient accompanied to hospital		1
Visits to day nurseries		12
Posture classes		12
Special visits		342
Total number of all visits		445
Number hours spent in station by nurses		1,871
Number hours spent in tuberculosis clinics		271
Number hours spent in conference by nurses †		1,523
Number hours spent in posture clinics		12

HEALTH UNITS.

MISCELLANEOUS UNIT ACTIVITIES:	
Complaint of insanitary conditions	33
Number of persons given health and other information	745
City visitors	196
Out of city visitors	17
DENTAL SERVICE:	
Number of children's teeth cleaned	71
Number of children treated	349
Prophylaxis	554
EYE SERVICE:	
New cases	18
Number of refractions	45
Number of glasses prescribed	23
Number of examinations for diagnosis	34

* Includes 126 ophthalmia cases; 68 wrong addresses; 498 not seen; 692 absent visits.

† This includes child health conferences, vaccination and diphtheria immunizations at stations.

CHILD HYGIENE DIVISION:

Number of child health conferences	22
Total attendance at conferences	1,175
New babies at conferences	146
New preschool age children at conferences	9
Vaccinations performed	90
Vaccination certificates issued	118
Number of examinations for camps and day nurseries	611
Number of posture clinics	16
Total attendance at posture clinics	297
Number of posture classes for nurses	27
Number of toxin-antitoxin administrations	2

TUBERCULOSIS CLINICS:

Number of clinics	38
Attendance at tuberculosis clinics	467
New cases	94
Alpine lamp treatments	295
Attendance at roof clinics	835

NURSING SERVICE:

Homes visited by nurses	2,297
Total visits to babies and preschool children	1,489
Total communicable disease visits	735
Infant death investigation	16
Special visits	15

BOSTON LYING-IN HOSPITAL:

Pre-natal Clinic:

Number of clinics	7
Attendance	115
New cases	32

COMMUNITY HEALTH ASSOCIATION:

General Division:

Home visits by nurses	4,748

BOSTON DISPENSARY:

Calls by district physician	24

STATE DEPARTMENT OF MENTAL DISEASES:

Number of clinics	4
Attendance at clinics	10
Visits of workers	1
Home visits	60

BOSTON SCHOOL DEPARTMENT

Playground attendance	3,008

CHILD HYGIENE DIVISION.

REPORT OF TOXIN-ANTITOXIN ADMINISTRATIONS AND VACCINATIONS AT CHILD HEALTH CONFERENCES DURING JULY, 1927.

Station.	Toxin-Antitoxin.			Number of Vaccinations Made.
	First.	Second.	Third.	
Old Town Hall, Brighton	1	1	1	—
31 Lincoln street, Brighton	1	1	1	8
Charlestown Municipal Building	1	1	1	19
Codman Square, Dorchester	2	3	5	31
Columbia Road Municipal Building	3	1	4	26
7 Gordon place, Dorchester	—	—	—	29
East Boston Health Unit	1	—	—	5
Hyde Park Municipal Building	1	1	1	10
Curtis Hall, Jamaica Plain	1	1	2	5
41 North Margin street	5	4	2	5
Roslindale Municipal Building	5	6	3	9
Beth Israel Hospital	4	4	2	5
Children's Hospital	—	—	—	1
1049 Columbus avenue	5	7	1	41
Vine Street Municipal Building	—	—	2	43
140 Dorchester street	1	—	2	11
57 East Concord street	1	—	—	1
Shawmut Avenue Municipal Building	—	—	—	6
122 Tyler street	1	5	6	5
17 Blossom street	—	—	—	—
Totals	33	35	33—101	260

MONTHLY REPORT OF CHILD HEALTH CONFERENCES JULY, 1927.

Station.	Number of Babies.	Number of Preschool.	Total Old Cases.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	164	3	167	30	1	31	4	42
31 Lincoln street, Brighton	58	24	82	8	1	9	4	21
Charlestown Municipal Building	353	51	404	37	—	37	7	58
Codman square, Dorchester	413	51	464	91	15	106	7	56
Columbia Road Municipal Building	447	2	449	52	—	52	7	64
7 Gordon place, Dorchester	227	8	235	44	—	44	4	59
East Boston Health Unit	394	39	433	78	1	79	7	62
Hyde Park Municipal Building	131	9	140	22	1	23	3	47
Curtis Hall, Jamaica Plain	176	23	199	32	2	34	4	50
41 North Margin street	207	99	306	36	5	41	8	38
Roslindale Municipal Building	188	57	245	26	2	28	3	82
Beth Israel Hospital	145	20	165	32	1	33	4	41
Children's Hospital	91	—	91	11	—	11	4	23
1049 Columbus avenue	292	27	319	42	5	47	8	40
Vine Street Municipal Building	246	11	257	33	—	33	7	37
133 Dorchester street	347	40	387	68	10	78	8	49
57 East Concord street	112	10	122	17	1	18	4	30
Shawmut Avenue Municipal Building	107	17	124	18	4	22	4	31
122 Tyler street	91	17	108	12	—	12	4	27
17 Blossom street	364	73	437	33	3	36	7	63
Totals	4,553	581	5,134	722	52	774	108	46.5

REPORT OF ACTIVITIES OF CHILD HYGIENE DIVISION JULY, 1927.

Number of inspections made	201
Physical examinations for camps and day nurseries	669
Toxin-antitoxin administrations	14
Vaccinations performed	115
Vaccination certificates issued	71
Antityphoid innoculations given	7
Conferences	18
Visits to day nurseries	18
Visits to Catholic Charitable Bureau	4

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

Stores inspected	5,255
Reinspections	417
Sanitary defects remedied	210
Complaints at office	69
Referred to Sanitary Division	13
Milk applicants	63
Notices to abate nuisances	99
Court cases	2
Pending	2
Applications for pedlers' licenses approved	119
Vehicles inspected and approved	612
Laboratory Examinations:	
Bacteriological	2
Chemical	2

CONDEMNATIONS.

Meat:		Fruit:	
Beef	25,772½ pounds	Apples	6 cans
Calves	12 heads	Apricots	6 boxes
Corned beef	5 pounds	Blackberries	800 quarts
Frankfurts	271 pounds	Cantaloupes	8 dozen
Hearts	2	Cherries	6 pounds
Lamb	783 pounds	Grape fruit	19
Livers	42 each	Pears	4 dozen
Livers	150 pound	Prunes	20 pounds
Kidneys	50 pounds	Strawberries	6 quarts
Mince ham	60 pounds	Vegetables:	
Miscellaneous meat,	5,589 pounds	Corn	1 can
Plucks	51	Corn	54 dozen
Pork	1,435¼ pounds	Corn	21 bushels
Poultry	354¼ pounds	Lima beans	15 bushels
Smoked shoulders	6 pounds	Onions	700 pounds
Sweetbreads	139 each	Potatoes	36,000 pounds
Tongues	11 each	Tomatoes	3½ bushels
Veal	1,872 pounds	Tomatoes	43 cans
Veal loaf	13 pounds	Miscellaneous:	
Fish:		Butter	6 pounds
Eels	135 pounds	Eggs	9 dozens
Salt fish	6 pounds	Ketchup	96 bottles
		Lard	19 pounds
		Salt	800 pounds

LIVE STOCK INSPECTION (Brighton Abattoir).

Cattle inspected	2,375	Parts condemned (lbs.)	8,823
Calves inspected	2,270	Animals condemned	18
Swine inspected	3,112		

DAIRY DIVISION.

Total number of services	1,251	Total cattle inspected	10,862
Dairies inspected	758	Inspections of milk plants and licensed dealers	297
Scoring above 50*	537	Bacteriological examinations	149
Scoring below	221	Country creamery inspections	23
With milk rooms	525	Sediment tests	15
Without milk rooms	233		
Inactive	3		

BUREAU OF MILK INSPECTION.

SAMPLES EXAMINED.

CHEMICAL:	
Milk from wagons	189
Milk from stores	693
Milk brought by citizens	3
Vinegar	17
Ice cream	24
Pineapple syrup	1
Water	1
Whiskey	2
BACTERIOLOGICAL:	
Milk	502
Ice cream	71
Court cases	7
Fines	$100

SANITARY INSPECTION.

Original inspections	2,130	Complaints investigated	886
Reinspections	7,696	Court cases authorized	5
Legal notices served	232		

BACTERIOLOGICAL LABORATORY.

Diphtheria	618
Tuberculosis	331
Typhoid	48
Gonorrhea	625
Gonorrheal ophthalmia	69
Syphilis	1,261
Other examinations†	122
Bacteriological examinations of milk	502
Bacteriological examinations of ice cream	71
Swimming pools examined	72
Water from beaches examined	7
Water from schools examined	12

* Passable mark.

† Smear from throat 1; orangeade for foreign matter, 1; smear for organisms, 1; dogs' heads for rabies, 3; corned beef for purification, 1; clams for B coli, 1; cultures from plates and fountains for organisms, 5; urine for sugar and albumen, 64; blood culture, 1; sputum for Vincent's, 1; smear from gum for Vincent's, 2; paratyphoids, 6; facies for typhoid, 5; urine for typhoid, 4, water from well for pollution, 1; smear from dog bite for organism, 1; virulence tests, 8; malaria, 6; genito-urinary examinations, 10.

VITAL STATISTICS, JULY, 1927.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING JULY, 1927, WITH COMPARATIVE FIGURES FOR JULY, 1926.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
All Causes:						
Total deaths	756	793	—37	11.44	12.09	—.65
Nonresidents deducted	596	607	—11	9.02	9.25	—.23
By Age:						
Under one year	94	104	—10	1.42	1.58	—.16
One year to four years, inclusive	32	41	—9	.48	.62	—.14
Sixty years and over	261	271	—10	3.95	4.13	—.18
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	27	37	—10	.41	.56	—.15
Arteriosclerosis	11	12	—1	.17	.18	—.01
Heart disease	151	143	+8	2.28	2.18	+.10
Nephritis, chronic	37	41	—4	.56	.62	—.06
Infant and Maternal Mortality:						
a. Total registered live births	1,430	1,419	+11	21.64	21.63	+.01
b. Registered stillbirths	34	36	—2	.51	.55	—.04
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	23.07	24.74	—1.67
c. Deaths of mothers from causes incident to childbirth	5	20	—15	.07	.30	—.23
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	3.39	13.74	—10.25
Deaths of children in first year of life	94	104	—10	1.42	1.58	—.16
Deaths in first year per 1,000 live births	.....	.....	.....	65.73	73.29	—7.56
Violence:						
Accidents	47	58	—11	.71	.88	—.17
Homicides	6	4	+2	.09	.07	+.02
Suicides	7	7	—	.10	.10	—
Miscellaneous:						
Alcoholism, acute or chronic	9	7	+2	.14	.10	+.04
Broncho-pneumonia	27	26	+1	.41	.40	+.01
Cancer	95	81	+14	1.44	1.23	+.21
Cirrhosis of the liver	6	5	+1	.09	.08	+.01
Diabetes mellitus	15	19	—4	.23	.30	—.07
Diarrheal diseases, children under two years of age	24	14	+10	.36	.21	+.15

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	9	1	+8	.14	.015	+1.25
Deaths.	4	1	+3	.06	.015	+.045
Cerebrospinal meningitis.....Cases..	3	6	—3	.04	.09	—.05
Deaths.	3	5	—2	.04	.08	—.04
Diphtheria.....Cases..	106	60	+46	1.60	.91	+.69
Deaths	7	3	+4	.10	.04	+.06
Influenza.....Cases..	12	1	+11	.18	.015	+.165
Deaths.	2	—	+2	.03	—	+.03
Measles.....Cases..	357	144	+213	5.40	2.19	+3.21
Deaths.	2	4	—2	.03	.07	—.04
Pneumonia (lobar).....Cases..	57	51	+6	.86	.78	+.08
Deaths.	19	12	+7	.29	.18	+.11
Scarlet fever.....Cases..	147	160	—13	2.22	2.44	—.22
Deaths.	1	3	—2	.015	.04	—.025
Tuberculosis (pulmonary).....Cases..	135	144	—9	2.04	2.19	—.15
Deaths.	57	52	+5	.86	.79	+.07
Tuberculosis (other forms).....Cases..	28	36	—8	.42	.55	—.13
Deaths.	2	8	—6	.03	.12	—.09
Typhoid fever.....Cases..	7	10	—3	.10	.15	—.05
Deaths.	—	3	—3	—	.04	—.04
Whooping cough.....Cases..	99	162	—63	1.50	2.47	—.97
Deaths.	2	3	—1	.03	.04	—.01

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1927 (mid-year), based upon the federal census of 1920, has been used.

It is due to ignorance, and is a reflection upon the intelligence of any person, to become ill with typhoid fever or smallpox. Protective means have been discovered by which these diseases may be banished. It has been demonstrated that vaccination will protect you. Why not take advantage of this really free protection? Consult your family physician or the Health Department before you leave for your vacation.

VACCINATION IS SAFE — IT IS SOUND — IT IS SURE.

VITAL STATISTICS, SIX MONTHS COMPARATIVE FIGURES.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING FIRST SIX MONTHS OF 1927 WITH COMPARATIVE FIGURES FOR FIRST SIX MONTHS OF 1926.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
ALL CAUSES:						
Total deaths	**5,916**	6,491	—575	**14.92**	16.49	—1.57
Nonresidents deducted	**4,788**	5,362	—574	**12.07**	12.62	—1.55
BY AGE:						
Under one year	**763**	768	—5	**1.92**	1.95	—.03
One year to four years, inclusive	**241**	367	—126	**.61**	.93	—.32
Sixty years and over	**2,372**	2,654	—282	**5.98**	6.74	—.76
BY SPECIAL CAUSES:						
DEGENERATIVE DISEASES, SO CALLED:						
Apoplexy	**332**	342	—10	**.84**	.87	—.03
Arteriosclerosis	**141**	195	—54	**.35**	.49	—.14
Heart disease	**1,153**	1,331	—178	**2.91**	3.38	—.47
Nephritis, chronic	**355**	337	+18	**.89**	.86	+.03
INFANT AND MATERNAL MORTALITY:						
a. Total registered live births	**9,202**	8,852	+350	**23.21**	22.49	+.72
b. Registered stillbirths	**289**	290	—1	**.73**	.74	—.01
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	**30.45**	31.72	—1.27
c. Deaths of mothers from causes incident to childbirth	**82**	69	+13	**.21**	.17	+.04
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	**8.64**	7.55	+1.09
Deaths of children in first year of life	**763**	768	—5	**1.92**	1.95	—.03
Deaths in first year per 1,000 live births,	.....	.....	.....	**82.92**	86.76	—3.84
VIOLENCE:						
Accidents	**290**	269	+21	**.73**	.68	+.05
Homicides	**9**	17	—8	**.02**	.04	—.02
Suicides	**39**	51	—12	**.10**	.13	—.03
MISCELLANEOUS:						
Alcoholism, acute or chronic	**70**	93	—23	**.18**	.24	—.06
Broncho-pneumonia	**353**	452	—99	**.89**	1.15	—.26
Cancer	**604**	586	+18	**1.52**	1.49	+.03
Cirrhosis of the liver	**40**	30	—10	**.10**	.08	+.02
Diabetes mellitus	**104**	123	—19	**.26**	.31	—.05
Diarrheal diseases, children under two years of age	**49**	54	—5	**.12**	.14	—.02

NOTE.— Figures for 1927 subject to slight change.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON, SIX MONTHS COMPARATIVE FIGURES. FIRST HALF OF YEAR 1927 COMPARED WITH FIRST HALF OF YEAR 1926.

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	14	5	+9	.03	.012	+.018
Deaths.	3	2	+1	.007	.005	+.002
Cerebrospinal meningitis.....Cases..	19	22	—3	.05	.05	—
Deaths.	16	12	+4	.04	.03	+.01
Diptheria.....Cases..	830	493	+337	2.09	1.25	+.84
Deaths.	34	32	+2	.08	.08	—
Influenza.....Cases..	130	350	—220	.33	.98	—.56
Deaths.	21	64	—43	.05	.16	—.11
Measles.....Cases..	2,109	3,969	1,860	5.32	10.08	—4.76
Deaths.	16	48	—32	.04	.12	—.08
Pneumonia (lobar).....Cases..	895	1,180	—285	2.26	3.00	—.74
Deaths.	361	438	—77	.91	1.11	—.20
Scarlet fever.....Cases..	3,108	1,924	+1,184	7.84	4.89	+2.95
Deaths.	37	26	+11	.09	.07	+.02
Tuberculosis (pulmonary).....Cases..	804	875	—71	2.03	2.22	—.19
Deaths.	322	381	—59	.81	.97	—.16
Tuberculosis (other forms).....Cases..	164	215	—51	.41	.55	—.14
Deaths.	47	16	+31	.12	.04	+.08
Typhoid fever.....Cases..	31	34	—3	.08	.09	—.01
Deaths.	3	1	+2	.007	.002	+.005
Whooping cough.....Cases..	441	2,768	—2,327	1.11	7.03	—5.92
Deaths.	13	92	—79	.03	.23	—.20

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1927, and July 1, 1926 (midyear), based upon the federal census of 1920, has been used.

Note: Figures for 1927 subject to slight change.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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DISEASE-CARRIER PROBLEMS.

From time to time something happens to demonstrate forcibly that public protection against contagious diseases calls for a more practical recognition of the fact that contagious diseases are spread chiefly by people who are apparently well.

It may be a local outbreak of typhoid fever which thus serves to emphasize the public danger from a person who is working at his or her customary vocation. Ever since the cook, "Typhoid Mary," was made famous by the number of cases of typhoid fever which were found to have occurred in the homes of her various employers, the person who continues to distribute typhoid bacilli long after recovering from typhoid fever has tended to monopolize attention and apprehension as a disease spreader.

Why such "chronic" typhoid carriers do not cause more trouble is really something of a mystery. A health official in one of our states estimates that 6 per cent of his population are such carriers, but even in Massachusetts where typhoid fever is a comparatively rare disease

and natural immunity therefrom presumably uncommon, the chronic typhoid carriers are evidently not as great a danger as might be expected from their estimated number.

Equally, if not more important as a factor in spreading typhoid fever is the "typhoid carrier" of another sort, the person who has contracted the disease and who, in its earlier stage, continues his regular work and daily contacts with others until he becomes ill enough to stay abed — the "Walking typhoid" as he may be called.

In the cholera outbreak in Europe in 1911, it came to be appreciated, as never before the extent to which the "cholera carrier" was responsible for the spread of this disease. Not only were carriers found among those who had recovered from acute attacks of cholera, but it was also demonstrated that persons could be temporary or persistent carriers who had never presented any recognized symptoms of cholera. There were carriers of nonvirulent "vibrios," but fatal cases of cholera were repeatedly traced to "carriers" of virulent cholera bacilli.

Diphtheria offers embarrassing carrier problems to the city health officer who is forced to recognize it. The late Dr. David D. Brough, of the Boston Health Department, estimated that during the winter season in Boston 2 per cent of the school population would furnish positive laboratory reports on throat cultures. Health officers in other American cities have made a similar estimate. If virulence tests with animals on a large scale were practicable they could doubtless show that in most instances the organisms obtained by culturing the throats of the population at random are nonvirulent. It would seem that in positive cultures obtained from throat or noses normal in appearance the organisms will almost always prove to be nonvirulent. On the other hand, the diphtheria carrier is undoubtedly an important factor in spreading the disease. A neighborhood outbreak is often found to be due to a scabby nosed immune child whose sore nostril serves as a culture medium from which to distribute virulent bacilli among his playmates. In two instances of a suspiciously large number of diphtheria cases in the clientele of physicians, the Boston Health Department has found that the physicians themselves were carriers.

Scarlet fever is another common disease presenting a carrier problem, but like measles, whooping cough, influenza and acute contagious diseases generally, scarlet fever is spread far more often by carriers who are persons in the early and as yet unrecognized stage of the disease.

The chronic carrier phenomenon is really an exceptional result of any acute contagious disease. Usually, in the regular course of such an infection, including typhoid fever, the constitutional reaction to the primary infective agent, as indicated by fever and other

phenomena referred to as clinical symptoms, serves its bioligical purpose and not only brings about the neutralization of any poisonous products of the infecting organisms, but the disappearance of the organisms themselves, provided, of course, the patient does not die in the meantime.

It would seem reasonably well established that the contagiousness of influenza practically disappears with the appearance of the fever. In most instances a case of measles which has been highly infectious to susceptible contacts for several days rapidly becomes harmless after the appearance of the rash. In some other diseases, the usual contagious stage may be relatively longer, but probably in all the most highly contagious stage occurs before the disease is recognizable from clinical symptoms. Persons in this stage of a contagious disease are therefore generally of more practical importance so far as public health is concerned than the exceptional individual in whom the germs of primary infection may survive. The conventional procedure of applying quarantine to cases of contagious diseases after they become recognizable is not useless, but its supposed efficacy is really to be accounted for chiefly by the natural immunity of persons exposed to such contagious cases before they were quarantined. An epidemic of any acute contagious disease will play itself out in a community when the immune whom it produces reach a certain percentage of the population, but no epidemic can otherwise be checked without artificial immunization or the application of other precautionary measures to individuals before they show practically recognizable symptoms of illness.

The above statement applies also to another kind of disease carriers, generally disregarded in public health programs, and yet who are directly responsible for a large part of the total annual mortality in any community among both the young and the old.

Deaths over the world in the influenza epidemic of 1918–19 were counted in millions. No epidemic had ever shown a comparable mortablity. The infective agent of influenza has not yet been positively identified. It is known, however, that death was seldom due directly to the infective agent of influenza itself. In most instances, death came from some form of pneumonia produced by organisms frequently to be found in the mouths and throats of healthy people. The influenza served to make these organisms highly dangerous. Included among such organisms are various varieties, types or strains of streptococci, staplycocci and pneumococci.

As with influenza, measles rarely kills of itself. Death comes from pneumonia in which the chief factor is some of these common organisms just referred to and to which measles has made the patient vulnerable. Pneumonia, produced by such common organisms, is

likewise accountable for fatalities in whooping cough. The same is true with respect to respiratory infections generally. It is true of tuberculosis. The prostration and fever with wide variations in temperature marking the dangerous phase of tuberculous infection is characteristic of the work of a streptococcus which has appeared to reinforce the tubercle bacillus. It is just as logical to direct treatment in tuberculosis toward complicating infections with common organisms of the class to which the streptococci belong as to the tubercle bacillus itself. As a matter of fact, our conventional treatment of tuberculosis is well adapted to help a patient overcome infections in which the tubercle bacillus is not involved.

The primary cause of the inflammatory manifestations of some part of the respiratory tract known as a "cold" is a debatable subject. Probably a cold does not always begin from the same cause.

Pneumonia in a large proportion of cases is preceded by a cold. Deaths from pneumonia in Boston every year are nearly twice those from tuberculosis. If statistical compilation were practicable the same could doubtless be said of the deaths resulting directly or indirectly from throat, ear or sinus complications or sequelæ of a cold. Whatever the cause of a cold, whether it be some special infecting agent or agents or some constitutional disturbance or a manifestation of protein sensitivity or a simple mechanical irritation, the fatal outcome will practically always be found to be the work of the streptococcus or some other common organisms which may ordinarily be taken into or carried or cultivated in one's nose or mouth without harmful results.

Vulnerability to these organisms is also brought about by other conditions than the acute diseases which have been mentioned. Apparently any exhausting or debilitating influence may serve to make the presence of the pneumococcus, the streptococcus or other similar bacteria dangerous.

The mortality from measles in military hospitals has been notoriously high. As in influenza death has been due to complicating pneumonias. Pneumonia is likewise accountable for frequent and unexpected deaths in other hospital cases, both medical and surgical. Complicating infections with other common organisms may likewise occur. In the "Journal of the American Medical Association" for April 30, 1927,* there is a report of instances of hemolytic streptococcus operative wound infections in clean cases in a prominent New York hospital and their cause. During the past year the help of the Boston Health Department was invoked because of an unusual number of streptococcus sore throats among the nurses and patients in medical wards of a hospital. In a military hospital during the

* Hemolytic streptococcus in surgical operating personnel, Frank Lamont Meleney, M. D.

war, routine throat examinations of patients showed that if they did not "carry" a hemolytic streptococcus on admission they acquired these organisms within a few days thereafter.

In the general population of a community like Boston it would appear that carriers of the hemolytic streptococcus and other bacteria of the class of which it may be taken as representative increase in number in the population from autumn and reach their maximum in the early spring, although the rate at which they approach their maximum may vary in different years. In the investigation reported in the "Medical Journal" article above referred to the peak of hemolytic streptococcus carriers among the hospital physicians and nurses of the surgical staff examined through two years reached their peak in April in one year and in May the next. Of 125 physicians and nurses examined, twenty-seven were found to be carriers of a hemolytic streptococcus at one time or another. The records of the Boston Health Department show that deaths directly attributable to pneumococci and streptococci regularly reach their maximum early in March. Our investigations show also that absenteeism in local industries on account of respiratory diseases reach its peak about the same time and quite probably before the carriers of the organisms involved really attain their maximum in the community.

In accounting for the winter time multiplication of streptococci and pneumococci carriers in the community one naturally thinks of droplet transmission in crowded street cars and at public gatherings. The hospital referred to in the "Medical Journal" article was apparently able to stop the infection of its surgical cases by operating room masking.

Direct transference from person to person in this manner is certainly not the only and may be not the chief means of multiplying carriers of such organisms. The breath transplantation of bacteria into a normal throat through normal nostrils is not exactly the same as coughing such organisms directly into a specially prepared culture medium on a plate.

The above mentioned hospital outbreak of hemolytic sore throats in which the Boston Health Department was concerned ceased when there was put into effect a dishwashing procedure which assured the sterilization of the nurses' eating and drinking utensils. Boiling mess gear, including glasses, and advice to wash hands before eating has been followed by the disappearance of every other institutional outbreak of sore throats with which the Boston Health Department has had to deal.

These common bacteria which wait to attack a man "when he is down," are of vital importance in civil as well as military life, in

hospitals and other institutions, and to people in the community generally. We have no way as yet of determining a person's vulnerability to their attacks. While experiments indicate the possibility of artificially stimulating immunity or resistence, little hope can be seen at present of making such a means of defense of practicable application generally.

When an individual with measles escapes pneumonia we do not know whether to ascribe the escape to immunity to pneumonia-producing organisms or to chance in avoidance of exposure to them.- We do know, however, that as the carriers of pneumococci, streptococci and similar organisms increase among a group of persons or in the community generally, disability and deaths directly attributable to such organisms also increase. It seems therefore justifiable to assume that any procedure which would tend to check the multiplication of such carriers anywhere would prevent sickness and death. In so far as we may succeed in doing so, we are at present virtually dependent on our ability to find ways of applying the repeatedly learned and frequently ignored lessons of military experience. The same lessons are to be learned from those who are successful in the raising of animals.

Such experience tells us the following: The maintenance of a state of mechanical cleanliness in the habitation of living beings is important. Dust should be suppressed. It should be removed from the floors of the crowded barracks by wet washing the floors daily and any cleaning material which may of itself give rise to an irritating dust after the evaporation of the water is to be avoided. The efficacy of this procedure may perhaps be explained in part by the fact that pneumococci and streptococci may exhibit an extraordinary viability in the dust of human habitations.

It is not only important that theoretical ventilation be maintained in closed spaces occupied by living beings, but that such habitations be frequently flushed out thoroughly with fresh air. The same quarters should not be occupied continuously day and night by any considerable number of living beings. It is wiser at present to apply this teaching than to try to explain why it should be done. It is a safe bet that the explanation will not be the same as it will be twenty-five years hence.

The importance of the routine effective sterilization of eating and drinking utensils and the washing of human hands before eating cannot be over-estimated. This applies to the home as well as anywhere else. Here again it is wiser not to theorize too much. The coincidences of the adoption of a sanitary dishwashing procedure and the disappearance of sickness are not always to be explained.

It is important to protect the sick or debilitated. We are accustomed to seeing persons quarantined for the protection of others, even after supposed danger to others has really ceased. There should be a recognition of the need of isolating the sick for their own protection against healthy carriers of organisms to which the sick or weak may be abnormally vulnerable. We are doing no favor to the child convalescing from measles or whooping cough when we shorten his quarantine period and turn him loose to mingle with the crowd.

SCHOOLS AND THE SPREAD OF COMMUNICABLE DISEASES.

Diptheria, scarlet fever, whooping cough, measles and other ordinary communicable diseases are more common during the period of school life than at any other time. They prevail most extensively, too, during the autumn, winter and spring months, when schools are in session, and are less prevalent during the summer vacation period. Therefore, according to commonly accepted opinion, the schools are the chief channels through which diseases of this class are spread. Upon closer analysis, however, the case against the school is by no means so clear, for season is known to influence the prevalence of some communicable diseases quite without reference to school attendance.

Lobar pneumonia, for instance, is a communicable disease that is most prevalent during the cooler months of the year, but its increase in that season cannot be attributed to school attendance, for it is not prevalent among school children. Typhoid fever is characteristically a disease of the late summer and early autumn, showing a distinct seasonal variation, the increase corresponding rather closely with the opening of schools and yet no one undertakes to connect its autumnal increase with the opening of schools. Infantile paralysis, too, is ordinarily most prevalent in the late summer and early autumn, but there is no evidence to connect its spread with the opening of schools, for most of its victims are below school age and no school outbreak has ever been recorded. If these diseases fluctuate with the seasons, quite independently of school attendance, why should not scarlet fever, diptheria, measles and whooping cough do the same?

That school outbreaks do occur cannot be denied. They are, however, easily detected and standard school sanitation and management are sufficient to prevent their spread, except possibly the spread of measles and whooping cough, which are contagious so long before definitely recognizable. But outbreaks of measles and whooping cough are preventable and will be as promptly restricted or checked

as outbreaks of other contagious diseases now are, when those responsible for the health of school children are given authority and working forces sufficient to enable them to maintain an adequate inspection service and to act promptly on the findings that inspection develops.

If proof is wanted to show that schools do not afford conditions extraordinarily favorable to the spread of communicable diseases it can be found in the fact that school outbreaks are relatively rare, and that even second and third cases of a communicable disease in any school are not common except in the cases of measles and whooping cough; and these conditions exist in the face of the facts that thousands of patients suffering from communicable diseases are reported every year from among school children, the patients having not infrequently been in school during the communicable period. The explanation lies in the fact that under any modern system of school organization and medical inspection of schools, whether under direction of the Health Department or otherwise, anything resembling a school outbreak is promptly detected, investigated and, again with the exception of measles and whooping cough, restricted or checked.

The opening of school not infrequently coincides with an increase in the prevalence of scarlet fever, diptheria, measles, whooping cough and other diseases, or is shortly followed by such increase. But the opening of school coincides with other things too — with cooler days and nights, with shorter periods of daylight and longer hours indoors, with closed windows, and with more intimate personal contact in many relations of life. And he who would prove that of all these circumstances, school attendance is the one altogether or even chiefly responsible for the increased prevalence of the common communicable diseases must show that out of a given number of children attending school during a given time — the number of children and time being great enough to afford a fair basis for deduction— there occurs a larger number of cases of communicable diseases than occurs during the same time among another group of children, similarly circumstanced in every respect except that they do not attend school. In the absence of such direct evidence reliance must be placed on indirect or circumstantial evidence, which will attain value just in proportion as its proponents collate and present it with a view to the ascertainment of truth and not with a view to the support of some preconceived hypothesis. Until such evidence is forthcoming, it will be as well not to be too dogmatic about the relation of school attendance to the spread of communicable diseases, and to remember that in most communities the sanitary construction and administration of the day schools, public and private, compare

not unfavorably with the sanitary construction and administration of the homes from which the pupils come, of the movies and the Sunday schools which they attend, of the street cars in which they ride, and their general environment and manner of life.

Probably no one circumstance has done more to hold smallpox under control in the United States than the very general requirement of vaccination against smallpox, as a condition precedent to admission to the public schools. In the absence of any general requirement for vaccination during infancy or early childhood such as exists in some other countries, and in the absence of universal compulsory military service for men, with its incidental vaccination at the time of enlistment, the general population of this country is reached by vaccination only at the time of admission to school. The vaccination thus effected, however, not only produces immunity against smallpox for considerable periods of time but serves as a valuable part of the educative process by driving home into the minds of the pupils the efficacy of the procedure and the necessity for it in the interest of the individual and of the community.

Any weakness in the execution and enforcement of existing laws and regulations requiring vaccination as a condition precedent to admission to schools and any weakening or revocation of such laws and regulations would be a distinct menace to the welfare of the nation.

DIVISION OF TUBERCULOSIS — AS RECENTLY ORGANIZED.

The Division of Tuberculosis was created on April 1, 1927, by city ordinance. The Boston Sanatorium at Mattapan was made a part of the City Hospital, and therefore placed under the jurisdiction of the City Hospital Trustees. All of the activities in tuberculosis otherwise were made the responsibility of the Boston Health Department.

A new director was appointed, and assumed charge of the division on June 15.

By arrangement with the City Hospital Trustees, the power to admit patients to the Boston Sanatorium was placed in the hands of the Division of Tuberculosis.

Occupying beds at the institution as of April 1 were sixty cases, which properly belong in state institutions. That is, these cases had no settlement in the Commonwealth, and were therefore state charges. In addition to these cases, were approximately forty "arrested," and no longer a menace to the public. At the state infirmary at Tewksbury there were one hundred and nine (109) vacant beds; in the state institutions for tuberculous patients at

Rutland and North Reading, there were one hundred twenty-eight (128) Boston cases, a number five times in excess of the proper quota. In Boston, were a great many cases (number indefinite) requiring sanatorium treatment. The state is devoting its efforts mostly to the care of children, and with the exception of Rutland, there is no hospital under state health jurisdiction which will receive adult cases.

The Rutland waiting list as of April 1 was approximately one hundred sixty (160). On this list were approximately thirty (30) more Boston cases. This presented a problem, so far as the City of Boston was concerned, of rather huge dimensions, and the difficulties have been many in straightening out affairs so that properly settled Boston cases could be admitted to the Boston Sanatorium and the cases which properly belong to the state could be transferred. There is a decided shortage in bed capacity now existing for Boston.

The average number of deaths from pulmonary tuberculosis per year for the last five years is 659. Recognized authorities vouch for the statement that the bed capacity for the municipality should be equal to one bed for each death. So, therefore, if each one of the 422 beds at Boston Sanatorium was occupied by a legitimate Boston case, the city would still be 237 beds short of the required number. This presents a feature of the problem deserving of serious consideration within a reasonably short period.

As of this date, some progress has been made in the discharge of cases from the Boston Sanatorium, and the admission of Boston settled cases to the institution.

It was further suggested by the Commissioner to the Boston City Hospital Trustees that it would be a good plan to discontinue the practice of employing ex-patients as orderlies at the institution. This practice has been fairly extensively employed at this institution and is not, in the opinion of the Commissioner of Health and the director of this division, a good practice, inasmuch as these individuals occupy beds which it would be better economically to have occupied by the sick. In addition, it is considered that with few exceptions, these are not the type to improve the atmosphere surrounding tuberculous patients. A further suggestion was made that a change in the plumbing at the Children's Building would fit that building for the reception of thirty-five (35) to forty (40) adult patients. The children can be treated at the state institutions much more economically than at the Boston Sanatorium, and this is accentuated by the fact that our adult problem is so pressing, and promises to be pressing for a few years to come.

The co-operative spirit of the Boston City Hospital Trustees was excellent.

Care is taken now that no case enters the Boston Sanatorium until its Boston settlement is established.

To segregate properly the case which is a menace to the general public is a very important part of a tuberculosis prevention program. To properly care for the sick tuberculous patient is another important part, because it attempts to restore to the community a useful citizen, and to make the citizen independent. These two, combined, constitute really one part of the great program.

The second part is the effort put forth on the child population to preclude, in so far as is humanly possible, the chance of becoming a victim in the tender years of young adult life. This effort aims to build up and further the resistance of the child in those years when, as a whole, his resistance is its greatest, — between five and fifteen years of age. One of the activities in this regard has been the effort to build up certain selected children during the summer months on the roofs of the health units. This program was carried out by the Boston Sanatorium Trustees on one roof — North End Health Unit, 41 North Margin street, This year the commissioner initiated a program, which opened up three roofs, — South End Health Unit at 57 East Concord street, North End Unit at 41 North Margin street, and East Boston Health Unit at 79 Paris street.

One hundred and five (105) children were selected because of the fact that they were "contacts" with known tuberculous cases, and who, after examination by Dr. Cleaveland Floyd, Chief Examiner of the Tuberculosis Clinics, were considered the type which were in need of this special intensive care, and who could be improved thereby.

Associated with this effort was the mothers' classes. This was instituted by the Nursing Division, and as a correlation seems to warrant almost in itself the carrying out of this roof preventorium idea, the point in this being that the mothers are taught how best to handle the given child with the home purse strings. The importance of this can be readily seen when it can be easily understood that the great majority of tuberculosis cases must be taken care of at home, and that inasmuch as the chance for contact is great that unless the home authorities understand a real program of prevention, very little ground is to be gained, in the long run. It is the hope of the department, and I feel the determination of the commissioner, to increase this effort another year. A full report on this activity will be available in the early fall.

Another feature of the program which was established by the commissioner in April was the decentralization of the entire clinic effort at 57 East Concord street so that when this division had assumed direction, there were established tuberculosis examination

clinics at the South End, 57 East Concord street; the West End, 17 Blossom street; the North End, 41 North Margin street, and at East Boston, 79 Paris street, and in July, South Boston, 233 Dorchester street. It is hoped that before the end of the hospital year, at least two more clinics will have been established.

Conducting the examinations at these clinics is a corps of doctors numbering eleven, headed by Dr. Cleaveland Floyd as chief examiner.

The clinics are arranged so as to give day and evening service in each section. The physicians have been in part on this work a long time, and those who have been added to the force have been selected with great care. There is a happy co-operation with the three schools of medicine in Boston to the end that two examiners recommended by the dean of each school were added to the force, making six as a total. The entire group is attached in some way to the teaching forces of these schools, and the commissioner considers this a contribution to the further development of experts in the field, experts being so necessary in the program.

The commissioner made arrangements to purchase and set up at 57 East Concord street a complete X-ray outfit, and X-ray outfits were supplied by the Robert White Fund in the health units at the North End, East Boston and also South Boston. This completes a rather enviable outfit for the complete examination of incipient or potential cases of tuberculosis.*

With the changing over of the control of tuberculosis in April came the change in the field work, so far as pertained to the nursing effort. The entire field work previously in tuberculosis had been carried on by thirty-four nurses and two supervisors under the Boston Sanatorium Trustees. These were transferred to the nursing division of the Health Department, which division engaged in generalized system of nursing. Now the entire force of 110 nurses do tuberculosis work with their other activities.

The State of Massachusetts has charged to Boston approximately some 9,000 positive cases of tuberculosis, more or less. This department has not at the present time a grip on the location or present condition of all of these cases, but much progress has been made in even these few months, and the coming year will see much in definitizing the extent of the problem in this direction.

Much that has been promising and of profitable purport has been accomplished by conferences with the various unofficial organizations, and the department is most sanguine of gaining the full support of and aid of the Tuberculosis Association, the Boston

* A medical inspector, Dr. Harry Watts, was placed in charge of the X-ray service, and a technician temporarily appointed.

Health League and the various other organizations, all of which have much concern and interest in the carrying out of a great tuberculosis program.

IMPORTANT SUGGESTIONS FOR THE MANUFACTURE OF WHOLESOME ICE CREAM.

The production of ice cream that will meet every sanitary requirement is the desire of every progressive ice cream manufacturer. The new ice cream law, chapter 278, Acts of 1927, now in force, makes exacting demands for enforcement by public officials. Naturally, there may arise differences in opinion as to what may be deemed essential or necessary.

Perhaps the most important point to be considered is the real significance and value of the bacteria count. No longer is the subject of bacterial content high over the head of the average person. Rather is it a practical everyday question which vitally concerns every efficient ice cream manufacturer. Interpreted properly, the bacteria count in ice cream gives a real check on sanitary conditions, the ingredients and methods of pasteurizing and the finally resulting products.

Ice cream is different than milk in that bacteria is given more chance in milk which is ordinarily kept at a somewhat higher temperature. The ice cream, of course, is normally kept in the frozen state until it is consumed.

Construction of Rooms.

Good light and ventilation should be given every consideration. Provide plenty of daylight; it is a good natural sterilizer. Moisture in an ice cream factory may be somewhat eliminated by proper ventilation. In doing away with dampness, you not only improve working conditions but conserve the equipment.

If possible to install white tile or brick for the walls and ceiling, it will be a decided improvement over other materials merely painted. In the long run tile or brick may prove less expensive to maintain, as painting looks good for a short while only and must be refinished often. The floor should be of white cement, pitched one eighth of an inch per foot to an ample number of drains, and easy to flush. Windows should extend to the ceiling, flush to the walls without sills, so no dust or unusued articles can accumulate. Corners in construction should be rounded out to avoid dirt and to make cleaning easy.

It is suggested that machinery be placed on concrete bases for ease in keeping clean. All machines and equipment should be placed

far enough from the wall so the back could be easily washed and the tendency to accumulate rubbish limited.

All windows and doors should be screened against flies from May 1 to November 1.

Wash rooms and toilet rooms should be installed outside of manufacturing and stock rooms, and properly separated therefrom.

Floors should be washed at the end of the day's work with plenty of hot water and chemicals or good soap, and as often as ingredients fall on the floor.

The use of tobacco is forbidden in any part of the factory where ice cream is manufactured, stored or handled. Employees handling the ice cream should be dressed in clean working clothes. Racks at least eight inches from the floor should be provided for the ice cream storage. Drains should be disinfected at least once a week.

Be sure to clean all cans and equipment each day, and not allow dirty cans to stand overnight before being sterilized.

The practice of tasting the product after dipping in a finger is not to be tolerated.

Walls, ceiling and apparatus should be painted frequently.

Proper Equipment and Care.

Use care in selecting metal utensils and equipment so that no bad taste will be imparted to the product. See that the seams of all cans are properly soldered. Ice cream is readily susceptible to contamination and for this reason equipment should be carefully washed with steam, boiling water and chemicals, namely soap powders and detergents. Avoid, however, the greatest mistake made in washing equipment and that is to run boiling hot water into freezers and pipe lines just after freezing. This only cooks the butter fat and casein onto the metal and is difficult to remove. The proper way is to rinse the equipment with water above 90 degrees containing some chemical and run through the pipe and freezer. After emptying out you may then run the boiling water through to sterilize.

In making up ice cream, the mixer should be a skilled man who can detect by taste and smell that cream or milk is sour or bitter or contaminated by garlic or other substance. Analysis of the mixture and the ice cream should be made regularly to determine the sanitary conditions of both ingredients and equipment, as shown by the bacteria count.

This state has now got what may be considered the most comprehensive ice cream law in the country, in that it embodies many of the best features in the laws of other states, together with ideas originating with this law.

SURVEY OF THE QUALITY OF BOSTON MARKET MILK.

The following is the result of a survey made of market milk sold in Boston by dealers and chain stores during August, 1927. In Massachusetts the statute law requires a minimum of 12 per cent solids and 3.35 per cent butter fat; for bacteria it is required that it contain not more than 100,000 per cubic centimeter.

Name of Dealer.	Solids.	Fat.	Bacteria. Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Alden Brothers	12.65	4.10	24
Allen, Fred H.	12.34	3.83	20
Antetomasso, Peter	12.55	3.98	64
Barron, C. W.	14.20	7.10	24
Bergmann, J. H.	12.65	4.17	48
Bolio, William	11.89	3.35	14
Brandley, F. J. & P. J.	12.56	3.90	14
Casey, James	12.16	3.80	34
Cashin, James	12.36	3.80	60
Cedar Hill	13.25	4.35	37
Chapin, George	12.30	3.80	24
Childs Brothers	12.56	3.98	70
Clapp, Frank L.	13.04	4.10	60
Clark, Levi	12.11	3.65	19
Coleman, David	11.73	3.75	7
Converse, M. M.	12.56	4.00	80
Corkery, J. J.	12.20	3.75	50
Cosgrove, Martin S.	12.30	3.75	55
Cummings, F. S.	12.13	3.76	66
Cunningham, Paul	12.75	4.17	18
Cusick, W. H.	12.43	3.82	186
Dean, Louis W.	13.28	4.15	26
Deerfoot Farm	12.67	4.03	22
Denehy, Timothy	12.74	4.15	65
Driscoll, William B., Company	12.35	3.80	22
Duggan Brothers	12.79	4.03	60
Edgerly, Frank S.	12.34	3.83	44
Elm Spring Farm Company	12.49	3.75	23
Ferguson, M. D.	12.14	3.73	75
Furbush, A. J.	13.82	4.20	30
Garfield, Mason	14.52	5.10	28
Garvin, C. E.	15.81	6.60	11
Giroux, J. E. & H. J.	12.09	3.70	82

Name of Dealer.	Solids.	Fat.	Bacteria. Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Griffin Joseph L.	12.63	3.93	59
Gushee, C. W.	11.82	3.60	16
Herlihy Brothers	12.36	3.85	98
Hickey, M. J.	12.23	3.70	40
Holden, John E.	12.18	3.80	28
Hood, H. P., & Son	12.33	3.91	79
Hutchinson, F. T.	12.22	3.70	50
Jones, William T., Company	12.33	3.80	42
Kendall Brothers	12.43	3.88	29
Kingston, Samuel	12.70	3.90	24
Knapp, George J.	12.46	3.98	29
Lang Brothers	12.18	3.75	55
Larson, Charles	12.11	3.63	53
Lincoln Farms	12.72	4.65	56
Lyndonville Creamery	12.80	4.20	30
Manning, Peter	12.35	3.55	110
Maple Farm Milk Company	12.44	3.80	70
McAdams, J. F.	12.48	3.90	158
McKernan, James	12.36	3.77	77
Millwood Farms	12.29	3.87	30
Munchback, George	12.41	3.83	46
Newton & Pope	12.34	3.75	20
Noble, William F., & Co	12.46	3.90	43
Robinson, A. J.	12.43	3.95	28
Schuster, Adam	12.48	3.82	132
Seven Oaks	12.31	3.80	19
Shick, Jacob	12.63	3.83	48
Somerset Farms	12.58	4.05	16
Sterling Farms Milk	12.65	3.95	22
Stone, H. L.	12.32	3.68	26
Stuart, W. E.	12.48	3.89	13
Swett, Warren	13.08	4.38	241
Turner Center System	12.27	3.79	3
United Farmers Co-operative Creamery Company	12.41	3.77	32
Vartanian, S.	12.32	4.10	20
Vartanian, K.	12.71	4.08	14
Walker-Gordon	12.80	4.15	20
Weiller, E., & Sons	11.67	3.52	45
Werner Company	12.34	3.83	46

Name of Dealer.	Solids.	Fat.	Bacteria. Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Westwood Farms	12.26	3.76	29
White Brothers	12.38	3.83	80
Whiting Milk Companies	12.24	3.81	39
Whittemore, W. D	12.51	3.82	44
Wiswall, George A	12.33	3.82	178
Woodland, Charles L	12.26	3.88	34

CHAIN STORE MILK.

Name of Dealer.	Supplied by.	Solids.	Fat.	Bacteria. Thousands in One Cubic Centimeter.
		Per Cent.	Per Cent.	
The Great Atlantic & Pacific Tea Company.	Hood & Sons Company	12.34	3.88	60
The Cloverdale Company	Turner Center System, Inc.,	12.31	3.75	71
John T. Connor Company	Bellows Falls Co-operative Creamery Company.	12.81	4.08	41
Economy Grocery Stores	Whiting Milk Companies	12.09	3.63	34
The Ginter Company	United Farmers	12.82	4.08	111
Morgan Brothers Company	Morgan Brothers	12.43	3.85	18
O'Keefe's, Inc	Bellows Falls Co-operative Creamery Company.	12.81	4.05	94
Winer, M	Hyman Winer	12.79	4.18	63

SOME CONDITIONS IN CHILDREN THAT WOULD SUGGEST THE USE OF A HABIT CLINIC.

National Committee for Mental Hygiene, New York City.

I. Physical Conditions.

After the possibility of a physical disease has been eliminated by a thorough examination, we may find habit to be the cause of:

1. Disturbances of sleep.
   Wakefulness, restlessness, night terrors, sleep-walking.
2. Lack of normal appetite.
   Insufficient, excessive, capricious, or perverted appetite.
3. Disturbance of eliminative functions.
   Incontinence of urine, or faeces day or night.
   Difficult urination, constipation.
   Vomiting — persistent, or associated with correction or with some disagreeable duty.

4. Convulsive attacks.
   Holding the breath in crying or in a tantrum, hysterical spells, over-activity.
5. Headaches.
   In the absence of a physical cause, headache may be a nervous habit or may be used, without conscious intention, to avoid some disagreeable experience.
6. Speech defects.
   Baby talk (prolonged), stuttering, mumbling.
7. Miscellaneous nervous habits.
   Habit motions of mouth or body, nail-biting, thumb-sucking.

II. Mental Conditions or Personality Traits.

Usually an exaggeration of something that is normal at the right time and in the right degree.

1. Withdrawing of attention and interest from real life, day-dreaming, excessive make-believe.
2. A "turning in" of the personality.
   Shyness, self-centeredness, lack of self-confidence.
3. Fears.
   Of particular objects or general timidity.
4. Unusual attachments or dislikes.
5. Premature or unusual sex manifestations.
   Lack of modesty or excessive modesty.
   Oversensitiveness about sex or unusual interest in it.
   Masturbation.
6. Habitual whining or crying.
7. Obstinacy or negativism.
8. Temper tantrums.
9. Over self-assertion.
   Tendency to domineer, demands for attention, pugnacity.

III. Asocial Conduct.

1. Running away.
2. Lying.
3. Stealing.
4. Destructiveness.
5. Firesetting.
6. Sex assaults.
7. Cruelty.

DISHWASHING.

There are a number of factors in the prevention of what might be called dish-borne infection. The first of these consists in the use of reasonably hot water together with a sufficient amount of soap or

other detergent. The practical temperature range for wash water for hand work is from 105 to 110 degrees Fahrenheit, a temperature far below that used for pasteurization of milk and quite insufficient to kill bacteria. Dependence must be placed on the mechanical removal of bacteria by soap or other detergents. In plain language, dishes must be washed clean to remove bacteria.

The best soap to use is one giving a good lather, which partially insures good cleansing. Care will do the rest. So-called germicidal soaps are of no particular advantage for this purpose. It is not practical to use ordinary disinfectants in the presence of soap, although some of them may be used with other cleansing chemicals, such as trisodium phosphate. In the home a soft soap of good quality in amount sufficient to give a good lather is the only practical method.

The second preventive factor is the rinsing of dishes in hot water. This should remove the last traces of soap, together with any remaining dirt and germs. Again, it is not feasible in hand dish-washing to use water of such a temperature that all disease-producing germs will be killed. In restaurants it is possible to add a disinfectant to the rinse water, but in the home this is hardly practical. When dish-washing machines are used to rinse, water may be used hot enough to have germicidal action.

The third preventive measure is the use of clean towels for wiping dishes. Wiping dishes has always seemed to me an unnecessary refinement whose only value is to cater to the pride of the housewife. It should certainly be discouraged in public eating places, where it is likely to expose clean dishes to contamination both from towels and hands. The best equipped hotels and restaurants dry their dishes with hot air.

A fourth method for preventing the spread of disease by eating utensils is care in handling the dishes in setting a table or in serving. Waiters, waitresses and servants should be taught to handle dishes as little as possible and to avoid touching the rims and inner surfaces of water glasses and cups, the bowls of spoons and the tines of forks.

The conveyance of diseases, both intestinal and respiratory, by means of eating utensils is not only possible but is highly probable. The problem of prevention in connection with large public eating places can be solved by the use of dish-washing machines, operated with high temperature in both the wash and rinse waters, by the use of machine dryers, the training of employees in the handling of dishes and medical examination of the employees.

In the small restaurant or boarding house or home where a maid is employed the problem is more difficult. Emphasis on cleansing rather than on destruction of germs, frequent changing of dish-

water, the use of hot rinse water with an added germicide (not recommended in the home), a minimum handling of dishes and table ware, and the insistence on cleanly personal habits will reduce the chances for the spread of disease germs almost to the vanishing point."— (*Hygeia, June, 1927.*)

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING AUGUST, 1927.

Classification.	Number.	Percentage.
After death	5	12.82
Seven days or less	5	12.82
Eight to fourteen days, inclusive	3	7.69
Fifteen to twenty-one days, inclusive	4	10.25
Twenty-two to thirty-one days, inclusive	2	5.13
Within First Month. (Total)	19	48.71
Within second month	2	5.13
Within third month	4	10.25
Within fourth month	—	—
Within fifth month	—	—
Within sixth month	—	—
Within seventh month	—	—
Within eighth month	1	2.57
Within ninth month	—	—
Within tenth month	—	—
Within eleventh month	1	2.57
Within twelfth month	—	—
Within First Year Preceding Death. (Total)	27	69.23
Within second year	4	10.25
Within third year	—	—
More than three years	8	20.51
Grand totals	39	99.99

SUMMARY OF THE WORK, AUGUST, 1927.

BUREAU OF ADMINISTRATION.

Prosecutions ordered	12	Personnel:	
Legal notices	161	Permanent appointments	3
Lying-in Hospital approved	1	Leave of absence	1
Contracts awarded	4	Retirements	2
Forcible removal	1	Promotions	2
		Temporary employment extended	5

LICENSES, PERMITS, ETC., ISSUED.

Beverages	9	Offensive trades	3
Burial permits	902	Ice cream	14
Denatured alcohol	7	Pedlers	94
Hen licenses	89	Stable permit, final	1
Manicure-massage	132	Undertaker	1
Milk	128		

MEDICAL DIVISION.

Visits:		Cases brought to Boston for treatment	85
By medical inspectors	437	Deaths investigated	19
By veterinarian	273		
By investigator	218		

NURSING SERVICE.

Homes Visited		12,701
Child Hygiene:		
New cases visited	1,541	
Old cases revisited	7,831	
Total child hygiene visits *		9,372
Communicable Diseases:		
New cases visited	665	
Old cases revisited	4,552	
Total communicable disease visits *		5,217
Tuberculosis Visits::		
Cases visited	1,689	
Contacts visited	785	
Suspects visited	142	
Total tuberculosis visits		2,616
Miscellaneous Visits:		
Infant death investigations	95	
Maternal death investigations	5	
Patients accompanied to hospital	2	
Visits to day nurseries	13	
Posture classes	29	
Special visits	286	
Total number of all visits		15,019
Number hours spent in station by nurses		1,702
Number hours spent in tuberculosis clinics		707
Number hours spent in conference †		1,739
Number hours spent in nurses' meetings		21

HEALTH UNITS.

Miscellaneous Unit Activities:	
Complaint of insanitary conditions	855
Number of persons given health and other information	74
City visitors	17
Out of city visitors	5

* Includes 145 ophthalmia cases; 127 wrong addresses; 552 not seen.
† This includes child health conferences, vaccination and diphtheria immunizations at stations.

DENTAL SERVICE:

Number of children's teeth cleaned	5
Number of children treated	368
Prophylaxis	842

CHILD HYGIENE DIVISION:

Number of child health conferences	27
Total attendance at conferences	1,423
New babies at conferences	153
New preschool age children at conferences	14
Vaccinations performed	518
Vaccinations certificates issued	380
Number of examinations for camps and day nurseries	444
Number of posture clinics	18
Total attendance at posture clinics	616
Number of posture classes for roof children	2
Number of toxin antitoxin administrations	61
Total attendance at mothers' classes	11

TUBERCULOSIS CLINICS:

Number of clinics	41
Attendance at tuberculosis clinics	456
New cases	70
Alpine lamp treatments	14
X-ray examinations	60
Attendance at roof clinics	831

NURSING SERVICE:

Homes visited by nurses	2,231
Total visits to babies and preschool children	1,581
Total communicable disease visits	700
Total tuberculosis visits	679
Infant death investigation	106
Material death investigations	5
Special visits	286

BOSTON LYING-IN HOSPITAL:

Pre-natal Clinic:

Number of clinics	10
Attendance	157
New cases	41

COMMUNITY HEALTH ASSOCIATION:

General Division:

Home visits by nurses	4,968

BOSTON DISPENSARY:

Calls by district physician	26

BOSTON SCHOOL DEPARTMENT:

Playground attendance	4,344

CHILD HYGIENE DIVISION.

REPORT OF TOXIN-ANTITOXIN ADMINISTRATIONS AND VACCINATIONS AT CHILD HEALTH CONFERENCES FOR AUGUST, 1927.

Station.	Toxin–Antitoxin.				Number of Vaccinations Total.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	2	—	—	2	45
31 Lincoln street, Brighton	—	—	—	—	49
Charlestown Municipal Building	3	—	—	3	339
Codman Square Library	15	1	2	18	121
Columbia Road Municipal Building	9	8	9	26	164
1 Arcadia street, Dorchester	—	—	—	—	166
East Boston Health Unit	2	2	2	6	20
Hyde Park Municipal Building	2	2	1	5	102
Curtis Hall, Jamaica Plain	5	—	—	5	38
41 North Margin street	8	5	3	16	5
Roslindale Municipal Building	6	8	6	20	72
Beth Israel Hospital	6	4	3	13	4
Children's Hospital	—	—	—	—	4
1049 Columbus ave	—	—	4	4	212
Vine Street Municipal Building	—	—	—	—	222
133 Dorchester street, South Boston	3	3	1	7	84
57 East Concord street	1	2	—	3	10
Shawmut Avenue Municipal Building	1	1	—	2	16
122 Tyler st	3	1	1	5	7
17 Blossom street	1	1	1	3	—
Totals	67	38	33	138	1,680

MONTHLY REPORT OF CHILD HEALTH CONFERENCES AUGUST, 1927.

Station.	Number of Babies.	Number of Preschool.	Total Attendance	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	222	27	249	23	8	31	5	50
31 Lincoln street, Brighton	76	71	147	11	5	16	4	37
Charlestown Municipal Building	579	76	655	40	2	42	10	66
Codman square, Library	634	108	742	113	14	127	10	74
Columbia Road Municipal Building	672	7	679	73	1	74	10	68
1 Arcadia street, Dorchester	272	11	283	53	2	55	6	46
East Boston Health Unit	555	55	610	87	10	97	9	66
Hyde Park Municipal Building	226	11	237	29	2	31	5	47
Curtis Hall, Jamaica Plain	256	36	292	50	9	59	5	58
41 North Margin street	243	82	325	38	3	41	9	36
Roslindale Municipal Building	325	108	433	45	3	48	5	87
Beth Israel Hospital	182	21	203	29	2	31	4	51
Children's Hospital	109	10	119	17	3	20	5	24
1049 Columbus avenue	370	105	475	76	15	91	9	53
Vine Street Municipal Building	356	36	392	63	6	69	9	44
133 Dorchester street, South Boston	449	38	487	88	10	98	9	54
57 East Concord street	146	20	166	18	6	24	4	42
Shawmut Avenue Municipal Building,	124	27	151	12	12	24	5	30
122 Tyler street	111	29	140	16	1	17	5	28
17 Blossom street	399	84	483	29	1	30	9	54
Totals	6,306	962	7,268	910	115	1,025	137	51

REPORT OF ACTIVITIES OF CHILD HYGIENE DIVISION AUGUST, 1927.

Number of inspections made	208
Physical examinations for camps and day nurseries	191
Special examinations	298
Schick test	5
Toxin-antitoxin administrations	55
Vaccinations performed	820
Vaccination certificates issued	242
Antityphoid innoculations given	1
Conferences	7
Visits to day nurseries	9
Visits to parochial schools	0
Visits to Catholic Charitable Bureau	5

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

Reinspections	362
Stores inspected	3,557
Sanitary defects remedied	173
Referred to Sanitary Division	14
Milk applicants	55
Notices to abate nuisances	101
Court cases	16
Convictions	14
Fines	$130
Continued	1
Applications for pedlers' licenses approved	101
Vehicles inspected and approved	657
Laboratory Examinations:	
Bacteriological	1
Chemical	4

CONDEMNATIONS.

Meat:		Fish:	
Beef	1,357 pounds	Saltfish	96 pound
Corn beef	25 pounds	Salmon, canned	1,026 crates
Corn shoulder	50 pounds		
Frankfurts	24½ pounds	Fruit:	
Hamburger	10 pounds	Blueberries	32 quarts
Hog	160 pounds	Blueberries	8 crates
Livers	7	Peaches	40 crates
Miscellaneous meat	47 pounds	Miscellaneous:	
Plucks	6	Squash	40 cans
Poultry	212½ pounds	Chocolate	20 pints
Sweetbreads	11	Cereals	15 packages
Smoked shoulder	2 pounds	Mustard	12 jars
Spare ribs	6 pounds	Piccalilli	1 pound
Veal	385 pounds	Sugar	10 pounds

LIVE STOCK INSPECTION (Brighton Abattoir).

Cattle inspected	3,150	Parts condemned (lbs.)	15,556
Calves inspected	2,365	Animals condemned	38
Swine inspected	3,395		

DAIRY DIVISION.

Total services	1,133	Inactive	9
Dairies inspected	788	Total cattle inspected	8,872
Scoring above 50 *	556	Inspections of milk plants and licensed dealers	237
Scoring below	232	Country creamery inspections	8
With milk rooms	549	Sediment tests	86
Without milk rooms	239		

* Passable mark.

BUREAU OF MILK INSPECTION.

SAMPLES EXAMINED.

CHEMICAL:	
Milk from wagons	284
Milk from stores	855
Milk brought by citizens	8
Vinegar	48
Dyes	5
Oil	1
Water	1
Soft drinks	2
Liquor	5
Sugar	1
BACTERIOLOGICAL:	
Milk	756
Ice cream	142
Court cases	12
Fines	$100

SANITARY INSPECTION.

Original inspections	1,329	Legal notices served	133
Routine inspections	759	Complaints investigated	624
Reinspections	484	Court cases authorized	6

BACTERIOLOGICAL LABORATORY.

Diphtheria	423
Tuberculosis	303
Typhoid	82
Gonorrhea	697
Gonorrheal ophthalmia	61
Syphilis	1,225
Other examinations *	98
Bacteriological examinations of milk	756
Bacteriological examinations of ice cream	142
Water from swimming pools examined	50
Water from beaches examined	2

* Malaria, 6; genito-urinary tuberculosis, 16; smear for parasite, 1; paratyphoids, 6; smears for organisms, 3; urines for sugar and albumen, 54; dark field, 1; spinal fluid for organisms, 2; smears for Vincent's angina, 8; butter for organisms, 1.

MONTHLY REPORT OF VENEREAL DISEASE ACTIVITIES, AUGUST, 1927.

SYPHILIS.

Cases under investigation August 1	15
New cases	26
	25

Disposition of Cases.

Unable to locate	7
False address	3
Under treatment	6
Under investigation	25
	41
New cases reported by number	57

GONORRHEA.

Cases under investigation August 1, 1927	37
New cases	32
	69

Disposition of Cases.

Under treatment	11
Unable to locate	16
False address	7
Moved out of town — address unknown	4
Under investigation	31
	69
New cases reported by number	215

SUMMARY.

Cases under investigation August 1	52
New cases	58
	110
Unable to locate	23
False address	10
Moved out of town — address unknown	4
Under treatment	17
Under investigation	56
	110
Number of visits by venereal investigator	218

COMPLAINTS.

Placed under treatment	1
Unable to locate	2
Venereal Deaths Investigated	2

VITAL STATISTICS, AUGUST, 1927.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING AUGUST, 1927, WITH COMPARATIVE FIGURES FOR AUGUST, 1926.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
All Causes:						
Total deaths	801	803	—2	12.12	12.24	—.12
Nonresidents deducted	621	629	—8	9.40	9.59	—.19
By Age:						
Under one year	128	164	—36	1.94	2.50	—.56
One year to four years, inclusive	43	45	—2	.65	.69	—.04
Sixty years and over	279	254	+25	4.22	3.87	+.35
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	31	35	—4	.47	.53	—.06
Arteriosclerosis	15	14	+1	.23	.21	+.02
Heart disease	140	120	+20	2.12	1.83	+.29
Nephritis, chronic	49	38	+11	.74	.58	+.16
Infant and Maternal Mortality:						
a. Total registered live births	1,764	1,692	+72	26.70	25.79	+.91
b. Registered stillbirths	43	38	+5	.65	.58	+.07
Stillbirths per 1,000 births and stillbirths				23.80	21.96	+1.84
c. Deaths of mothers from causes incident to childbirth	14	10	+4	.21	.15	+.06
Deaths of mothers per 1,000 births and stillbirths				7.75	5.78	+1.97
Deaths of children in first year of life	128	164	—36	1.94	2.50	—.56
Deaths in first year per 1,000 live births				72.56	96.93	—24.37
Violence:						
Accidents	41	46	—5	.62	.70	—.08
Homicides	4	2	+2	.06	.03	+.03
Suicides	10	11	—1	.15	.17	—.02
Miscellaneous:						
Alcoholism, acute or chronic	5	6	—1	.015	.09	—.015
Broncho-pneumonia	37	22	+15	156	.33	+.23
Cancer	108	103	+5	1.63	1.57	+.06
Cirrhosis of the liver	2	5	—3	.03	.08	—.05
Diabetes mellitus	11	10	+1	.17	.15	+.02
Diarrheal diseases, children under two years of age	42	50	—8	.63	.76	—.13

		CASES AND DEATHS.					
		Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
		1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
Communicable Diseases:							
Anterior poliomyelitis	Cases..	64	6	+58	.97	.09	+.88
	Deaths.	12	1	+11	.18	.015	+.165
Cerebrospinal meningitis	Cases..	2	3	—1	.03	.04	—.01
	Deaths.	2	1	+1	.03	.015	+.015
Diphtheria	Cases..	76	32	+44	1.15	.49	+.66
	Deaths.	5	1	+4	.075	.015	+.06
Influenza	Cases..	1	4	—3	.015	.06	—.045
	Deaths.	1	—	+1	.015	—	+.015
Measles	Cases..	108	76	+32	1.63	1.16	+.47
	Deaths.	1	2	—1	.015	.03	—.015
Pneumonia (lobar)	Cases..	54	33	+21	.82	.50	+.32
	Deaths.	14	14	—	.21	.21	—
Scarlet fever	Cases..	74	77	—3	1.13	1.17	—.04
	Deaths.	3	3	—	.04	.04	—
Tuberculosis (pulmonary)	Cases..	146	145	+1	2.21	2.21	—
	Deaths.	39	53	—14	.59	.81	—.22
Tuberculosis (other forms)	Cases..	30	37	—7	.45	.56	—.11
	Deaths.	8	7	+1	.12	.11	+.01
Typhoid fever	Cases..	21	8	+13	.32	.12	+.20
	Deaths.	2	—	+2	.03	—	+.03
Whooping cough	Cases..	80	151	—71	1.21	2.30	—1.09
	Deaths.	4	3	+1	.06	.04	+.02

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1927 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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THE DIABETES DEATH RATE OF BOSTON.

It is gratifying to observe that during the first six months of 1927 the number of deaths from diabetes was only 104 against 123 during the corresponding period of 1926. The diabetes death rate, therefore, has gone down from 31 per 100,000 to 26. The normal death rate from diabetes for the United States registration area in 1924 was 16.6. The Boston rate is, therefore, much in excess of the general average which for large American cities in 1925 was 19.2. Many explanations have been advanced for this anomaly. It goes without saying, however, that many diabetics die in Boston hospitals who are nonresidents and who come here for treatment and in a condition when the disease is too far advanced for a hopeful prognosis. But granting this, there still remains a considerable excess in the Boston death rate which must be attributed to other causes or conditions. It is sometimes argued that the foreign born of certain racial origins, such as the Germans and the Irish, are more liable to diebetes than other races and this is particularly true of Hebrews. But all such conclusions are as yet based on only fragmentary observations. It is to be hoped that in the near future it will be possible to examine more thoroughly into the facts of the Boston situation so that the problem of possible prevention and control may be better understood and brought nearer to a solution.

Diabetes in the United States is increasing regardless of the beneficial effects of the insulin treatment. The latter, however, is not a cure for diabetes but an effective means of reducing the severity of the disease and of increasing the prolongation of life. It admits of no argument that the insulin treatment has added countless years to the lives of those who would otherwise have prematurely died from the disease. The average age at death in diabetes conforms quite closely to the average age in cancer and both diseases have something in common. It is generally conceded in diabetes at least that it is in a large measure the result of a disturbed metabolism due to overnutrition or a faulty diet. Diabetics, as a rule, are overweight and in some cases very considerably so. Diabetes is closely connected with a diet rich in carbohydrates and sugar. The dietary treatment of diabetes is in many cases fairly effective but the insulin treatment is specific and unquestionably of the greatest value. It returns the pancreatic function to something like normal. It is in a small proportion of cases an effective cure, possibly as much as 15 per cent. That at least is the opinion of Doctor Bunting who discovered the insulin treatment a few years ago. But insulin to be effective must be continuous and in strict conformity to medical advice. Aside from exceptional cases, it is generally speaking dangerous to practice self-administration and to apply individual judgment as to the risk of discontinuance.

Diabetes may occur at any age from soon after birth to the end of life but the mortality at ages under 15 is small or about 3.7 per cent of the diabetes deaths at all ages. This proportion increases somewhat between ages 15–34 years when it is 6.7 per cent of the deaths at all ages. There is a rapid increase in the proportion of 19.6 at ages 35–54. Most of the deaths from diabetes take place at ages 55 and over. Of the deaths at all ages 57 per cent occurred at ages 55–74 and 13.5 per cent at ages 75 and over. The age distribution of cancer is quite similar. In cancer also most of the deaths occur at ages 35 and over to be exact, in diabetes 90 per cent occurred at this time of life, while in cancer the proportion is 94 per cent. This is but one more indication that both cancer and diabetes are to a certain extent at least the result of errors in living habits particularly as regards a faulty diet and overnutrition.

Since 1915 the Boston diabetes death rate has been as follows:

MORTALITY FROM DIABETES, BOSTON, 1915–1926, RATE PER 100,000.

1915	26.15	1919	22.80	1923	24.27
1916	25.73	1920	23.29	1924	23.68
1917	19.82	1921	19.66	1925	21.19
1918	17.80	1922	29.05	1926	26.17

A striking fact of this table is the low death rate from diabetes during the war year 1918 and during the year of industrial depression of 1921. During both of these years food consumption was unquestionably much reduced in proportion to the population. In a recent address of mine on cancer and overnutrition, I have included some data as regards the per capita sugar consumption in the United States which has increased from 79.7 pounds in 1909 to 83.2 pounds in 1912 and to 116.3 pounds in 1924. It is probable that during the last two years there has been a further increase which may well arrest attention. Sugar consumption in the United States is much above the average for many other countries and the results of excessive consumption are apparently traceable in our higher death rate from diabetes, which is far above the average for all civilized countries combined. This fact was clearly brought out some ten years or more ago by Mr. Knud Stouman in an address delivered before the American Public Health Association. Mr. Stouman is now chief statistician of the medical section of the League of Nations.

Combining the diabetes mortality of Boston since 1915 to the end of 1926, there have been 2,128 deaths from this disease. Boston is justly proud of the high status of its medical profession and its associated institutional facilities. Here, if anywhere, diabetes is treated as effectively as it is possible within the present advances of medical science. Yet we witness an excessive death rate which is much higher now than twenty years ago. This, obviously, is a situation that calls for more thoughtful consideration. It is not a disease which falls strictly within the province of a Board of Health concerned chiefly with diseases of a contagious or infectious character and therefore subject to public control. The prevention of diabetes is essentially a matter of personal hygiene and the control of nutrition, which in all suspected cases requires qualified medical consideration. It is dangerous to take unqualified advice however well meaning. The present day tendency to reduce surplus weight deserves approval provided this is done under medical supervision. Unqualified advice with regard to reduction is dangerous, even though apparently the results may be satisfactory. The tables of standard weights in relation to adult age are not conclusive. The tables give values too high for the normal physiological requirements of the body. It would be much better to aim at a normal weight of 10 per cent below the average values as shown by the tables in general use. Such tables show what the facts are for the general population or for life insurance applicants, but they do not indicate what is really required or what should be the ideal situation.

The first indications of diabetes are usually revealed by a urinalysis indicating abnormal quantities of sugar in the urine. Such

examinations should be made at periodical intervals, if possible four times a year. But they should only be made at a thoroughly competent laboratory, for the tests for sugar are some times exceedingly delicate and no single examination should be accepted as conclusive. But a periodic medical and physical examination cannot be too strongly insisted upon as a prerequisite in all efforts at health conservation. Such examinations should take into careful account the bodily proportions and their variations from trustworthy standards, for it is not only a question of possible excess in weight but of the distribution of such excess in different parts of the body. Every person should keep a weight record, at least at monthly intervals, during the year as a guide to the examining physician. A few pounds more or less are, of course, of no importance, but where there is a persistent tendency of body weight to increase the situation is one which requires medical attention.

It has been said in this connection that "The term metabolism, so frequently used, may be taken to mean the utilization of the digested food which passes into the blood. Diabetes is a condition of disordered metabolism; that is, that although the system may receive all the food substances necessary for nutrition and muscular effort, it fails to utilize them in the normal manner." This principle should be thoroughly understood. Of late years we have heard much of a balanced diet, but the ascertainment of a proper balance for different types of organisms is not an easy matter. All the money expended in proper medical examinations and the correct ascertainment of scientific facts will bear a high rate of interest to the individuals concerned. There is nothing more delicate than the human organism, particularly in regard to metabolism. No mere offhand judgment can be properly adjudicated to the facts involved. The three elements of food, or in other words, the carbohydrates which represent starch and sugar, the proteins which represent the lean part of meat, fish, egg, etc., and the fats, have to be taken in proper relation to each other to constitute normal nutritional values. But this is by no means the whole of the story of metabolism and nutrition. Thoughtful consideration should be given to the question by every one who has the slightest reason for apprehending a tendency towards a diabetic condition. This does not necessarily mean constant reflection upon eating habits and their results. The more normal life is lived the healthier and happier it is likely to be. But indifference and apathy are infinitely worse than over attention, although the latter sometimes is carried to the extreme. If diabetes is treated in its earliest condition the outlook for success is decidedly hopeful and countless people are now living and in good health, who in former years would have died, because of the successful admini-

stration of dietary measures amplified by insulin.—FREDERICK L. HOFFMAN, *Consulting Statistician, Boston Health Department.*

PERNICIOUS ANEMIA.

The production of insulin and the discovery of the specific action of a liver diet in pernicious anemia are to be regarded as among most notable events in therapeutic progress in recent years.

The real cause of pernicious anemia has been and still remains unknown. Pernicious anemia is a condition which is easily recognizable by an examination of the blood. The changes in the blood are so characteristic as to indicate a special cause, different from those of other forms of anemia. In addition to abnormal development and changes in the cellular elements of the blood, there is a decrease in normal number of red blood corpuscles, but with little or no reduction in the hemoglobin content of the remaining red blood corpuscles themselves.

In other forms of anemia, there may be no decrease in the number of red corpuscles but the amount of hemoglobin in each corpuscle is reduced. Hemoglobin is what really gives blood its red color, the intensity of the redness depending upon the proportion of hemoglobin.

Pernicious anemia is also characterized by progressive weakness and other symptoms, both physical and mental. It ordinarily lasts several years before death comes. In the meantime, marked temporary improvement in the condition of a patient without apparent cause is frequently observed. The fact that such improvement can take place, that the blood does at times show a tendency to resume a normal condition has always encouraged the hope that a cure for pernicious anemia would some day be found.

Insulin furnishes the body with something which enables the muscles to take up sugar from the blood when the body has lost its power to perform this vital function itself. The inability of the body to continue this function gives rise to the condition which is known as diabetes.

The results of the feeding of liver and the accessory features of the diet which it is now customary to prescribe in pernicious anemia are not as yet capable of such a rational explanation as in the case of the administration of insulin in diabetes. As has been found with insulin in diabetes, a liver diet in pernicious anemia is probably also to be regarded as a means of preventing the consequences of an inability on the part of the body to continue a vital process rather than as a cure of a disease.

Our experience with liver in pernicious anemia is as yet too limited even to say how efficacious it will prove in controlling per-

nicious anemia. The results have, however, thus far been encouraging in enabling us to combat what has hitherto been a peculiarly hopeless disease and furthermore gives promise of promoting a better understanding of its underlying cause.

ULTRA-VIOLET LAMPS.

In 1905 Maj. Charles Edward Woodruff, M. D., of the Medical Corps of the United States Army, published a book which attracted a good deal of attention. It was entitled "Effects of tropical light on white men."

The theme was probably inspired by the discomforts of military service in the Philippines. The author endeavored to show the harmfulness of sunlight. Its dangers to the individual were portrayed. The decadence and extinction of superior northern races after migration to tropical or subtropical regions were pointed to as historical facts.

The disappearance of the ancient Greek culture was thus ascribed to the malign influence of the Mediterranean sunshine rather than to malaria, as other medico-historical writers have held. Major Woodruff did not deny that sunlight might have therapeutic uses, but his book might give a layman an impression that sunlight was to be employed judiciously, like strychnine or arsenic, for example, with some definite therapeutic object in view.

Now the pendulum has swung the other way. Sunlight has come to be popularly regarded as purely beneficent in its effects because of certain more recent discoveries.

It has been found that brilliant curative effects may follow exposure to sunlight in some infective processes, including certain forms or infective complications of tuberculosis. It has been shown that the results of exposure to the sun are both local and general. By such exposure biological as well as chemical changes may be produced in the blood, or the circumscribed local exposure to sunshine may bring about the disappearance of some localized skin affection which has long resisted other forms of treatment. Sunlight has been found to have a hitherto unrecognized influence on the development of animals as well as plants. Even when foodstuffs are exposed to sunshine, they acquire nutritive qualities which they do not otherwise possess. Heliotherapy, or the treatment of disease by the sun's rays, has thus come to be an approved method of treatment, not only of infective conditions, but of nutritive disorders.

It appears that the radiations from the sun which are especially valuable for the purposes above mentioned are what are generally referred to as the ultra-violet rays. Ultra-violet rays are emanations

from the sun which cannot be perceived by the eye as light or color. They are always present in sunlight in a certain amount, even indoors on a cloudy day, but they are intercepted to a great extent by clouds or by dust or smoke in the atmosphere or by ordinary window glass, no matter how strongly the sun may be shining. For the purposes of the treatment of disease, therefore, sunlight on mountains or on the sea, where the air is relatively free from impediments to the passage of ultra-violet rays, is most desirable. The practical difficulty in thus securing an abundant supply of ultra-violet rays from the sun whenever needed for medical purposes has led to attempts to produce ultra-violet rays artificially.

An ordinary incandescent electric light, a gas jet, or even a lamp, gives off a certain amount of ultra-violet rays, but rarely enough to be detected except by delicate laboratory tests. It has been found, however, that the passage of a current of electricity through mercury vapor contained in a quartz glass bulb will give off ultra-violet rays in abundance. All the so-called ultra-violet or quartz lamps which have come into use by physicians as a substitute for sunlight in the treatment of disease produce their radiations in this way.

Major Woodruff was not all wrong. We still have a good deal to learn regarding the effects of sunlight. The value and possible dangers of ultra-violet lamps are at present involved even in greater uncertainty. Moreover, these matters have become of definite practical importance because of the extent to which the selling methods of the manufacturers are increasing the popular use of such lamps for all sorts of purposes.

For the benefit of the medical profession, the Massachusetts Medical Society is engaged in an investigation of ultra-violet lamps with view to bringing about a better professional understanding of the mechanical limitations or weaknesses of such lamps, as well as their proper field of therapeutic usefulness and possible dangers.

From a report made to the Council of the Society on June 7, 1927, it would appear that the intensity, amount and character of the radiations from such lamps are likely to vary or change from various causes, some of which are not well understood. Lamps tend to lose their power to give off ultra-violet rays, often slowly, but sometimes rapidly. The instruments which are often thought by physicians to indicate the potency of a lamp do not do so. Even if there were such instrumental methods of indicating the dosage of lamps, they would be of limited practical value because of the wide variations of different individuals in response to the same "dose." As yet it would appear to be necessary "to feel one's way" by carefully testing out the reaction of each individual to exposure.

Over 4,300 questionnaires were sent out to physicians, calling for the results of their experiences with the lamps. It seemed to be generally conceded that the lamps were useful for the treatment of certain skin diseases, some forms of tuberculosis, of rickets and allied nutritive disorders, sluggish wounds or ulcers, and for "general tonic effects." Testimony as to the usefulness in these fields was, however, in some instances qualified by opinions of which the following are samples: "An adjunct to the practice of medicine; not a cure-all." "A valuable agent in a limited field."

The report indicates that there is a fear in the medical profession that the lamps may produce harmful or dangerous radiations perhaps not found in sunlight. This is voiced by one specialist who writes "There are a certain group of skin diseases that result from exposure to sunlight or certain rays of it. In the early X-ray work, we found we made a mistake when the results of exposure showed up years after. We do not want to repeat this mistake." The report states, however, that "all the unfavorable results reported (as a result of the questionnaire) from exposure to lamps are well recognized possibilities of exposure to the sun." Tolerance to sun's rays not only varies in individuals but is decreased by any abnormal physicial condition. Those who live in regions where the sun's rays have a real bite know how danger of sunstroke is increased by a slight febrile disturbance, by an acute infection or even by a digestive upset."

The questionnaire brings out considerable testimony as to unfavorable and even harmful results of exposure to lamps. Among the latter, are specified "dermatitis," "fatigue," "depression," "elevation of temperature," "headache," "nausea," "increase in toxic symptoms," "uremic-like symptoms, with suppression of urine," "a reaction similar to sunstroke."

In this connection, we also find such admonitory testimony as the following: "Be careful on first exposure, expecially with blondes," "I have found about one person in thirty who has been nauseated by five minute exposure." "Some types show marked debility if given beyond certain limits, but continue to improve if given less." "After a certain number of treatments it is well to stop, because there seems to be a point where no more benefit is to be derived from it. Then after a rest, the application may be resumed with benefit." There is also in the report other evidence indicating that in exposure to ultra-violet lamps as in exposure to strong sunshine there is a point which varies in individuals and in the same individual at different times where such exposure ceases to be stimulating and becomes depressing and harmful or dangerous.

In concluding, the report advises the physicians to whom it is addressed as follows:

"The commercial so-called ultra-violet lamps are capable of furnishing us with a therapeutic agent of considerable value."

We have still a great deal to learn regarding the way in which this agent should be used.

These lamps have harmful and perhaps dangerous possibilities which make their indiscriminate use inadvisable. Therefore, the committee feels that their use should always be under the supervision and control of the medical profession.

SURVEY OF THE QUALITY OF BOSTON MARKET MILK.

The following is the result of a survey made of market milk sold in Boston by dealers and chain stores during September, 1927. In Massachusetts the statute law requires a minimum of 12 per cent solids and 3.35 per cent butter fat; for bacteria it is required that it contain not more than 100,000 per cubic centimeter.

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Alden Brothers	12.62	4.01	16
Allen, Fred H	12.17	3.73	22
Antetomasso, Peter	12.83	4.10	17
Barron, C. W	14.26	5.30	14
Bergmann, J. H	12.83	4.19	32
Bolio, William	12.33	3.78	23
Brandley, F. J. & P. J	12.63	3.98	26
Casey, James	13.19	4.89	44
Cashin, James	12.43	3.82	41
Cedar Hill	13.38	4.43	17
Chapin, George	12.28	3.75	18
Childs Brothers	12.98	4.27	16
Clapp, Frank L	13.42	4.45	14
Clark, Levi	12.35	3.83	13
Coleman, David	11.85	3.78	10
Converse, M. M	12.63	4.10	15
Corkery, J. J	12.24	3.65	60
Cosgrove, Martin S	12.45	3.88	40
Cummings, F. S	12.43	3.78	14
Cunningham, Paul	12.80	4.23	20
Cusick, W. H	12.82	3.95	15

Name of Dealer.	Solids.	Fat.	Bacteria. Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Dean, Louis W.	13.28	4.15	30
Deerfoot Farm	12.51	3.93	16
Denehy, Timothy	12.37	3.98	866
Driscoll, William B., Company	12.55	3.88	17
Duggan Brothers	12.49	3.95	20
Edgerly, Frank S.	12.45	4.00	42
Elm Spring Farm Company	12.42	3.80	14
Ferguson, M. D.	12.30	3.80	70
Furbush, A. J.	14.45	5.23	38
Garfield, Mason	15.01	5.40	19
Garwin, C. E.	15.60	6.63	14
Giroux, J. E. & H. J.	12.18	3.68	38
Griffin, Joseph L.	12.49	3.85	20
Gushee, C. W.	12.64	3.95	120
Herlihy Brothers	12.53	4.03	120
Hickey, M. J.	12.34	3.75	14
Holden, John E.	12.29	3.73	27
Hood, H. P., & Son	12.33	3.85	21
Hutchinson, F. T.	12.07	3.53	8
Jones, William T., Company	12.44	3.85	27
Kendall Brothers	12.53	3.72	36
Kingston, Samuel	12.62	3.95	20
Knapp, George J.	12.75	4.32	55
Lang Brothers	12.43	3.88	62
Larson, Charles	12.24	3.72	24
Le Baron, F. N.	14.94	5.68	380
Lincoln Farms	12.38	4.12	18
Lyndonville Creamery	12.71	4.12	24
Manning, Peter	12.31	3.78	16
McAdams, J. F.	12.61	4.00	17
McKernan, James	12.50	3.85	35
Millwood Farms	12.41	3.83	12
Munchback, George	12.39	3.75	24
Newton & Pope	12.69	4.18	37
Noble, William F., & Co.	12.78	4.13	10
Robinson, A. J.	12.58	4.00	16
Schuster, Adam	12.29	3.83	20
Seven Oaks	12.35	3.86	19
Shick, Jacob	12.87	3.92	30

Name of Dealer.	Solids. Per Cent.	Fat. Per Cent.	Bacteria. Thousands in One Cubic Centimeter.
Somerset Farms	12.75	4.20	11
Sterling Farms Milk	12.69	3.90	15
Stone, H. L.	12.24	3.78	14
Stuart, W. E.	12.69	4.05	19
Swett, Warren	11.83	3.78	110
Turner Centre System	12.25	3.70	31
United Farmers Co-operative Creamery Company	12.62	4.10	22
Vartanian, S.	12.08	3.80	20
Vartanian, K.	12.38	3.85	180
Walker-Gordon	13.19	4.40	7
Weiller E., & Sons	12.43	3.90	30
Werner Company	12.39	3.88	24
Westwood Farms	12.39	3.85	17
White Brothers	12.50	3.92	22
Whiting Milk Companies	12.36	3.80	52
Whittemore, W. D.	12.59	4.05	16
Wiswall, George A.	12.55	3.90	60
Woodland, Charles L.	12.44	4.03	26

CHAIN STORE MILK.

Name of Dealer.	Supplied by.	Solids. Per Cent.	Fat. Per Cent.	Bacteria. Thousands in One Cubic Centimeter.
The Great Atlantic & Pacific Tea Company.	Hood & Sons Company	12.38	3.83	39
The Cloverdale Company	Turner Centre System, Inc.	12.32	3.85	17
John T. Connor Company	Bellows Falls Co-operative Creamery Company.	12.63	4.07	16
Economy Grocery Stores	Whiting Milk Companies	12.45	3.97	172
The Ginter Company	United Farmers	12.63	4.07	18
Morgan Brothers Company	Morgan Brothers	12.80	4.28	22
O'Keeffe's, Inc.	Bellows Falls Co-operative Creamery Company.	12.77	4.15	21
Winer, M.	Hyman Winer	12.77	4.05	157

SUMMARY OF THE WORK, SEPTEMBER, 1927.

BUREAU OF ADMINISTRATION.

Prosecutions ordered . . . 4
Legal notices 165
Contracts awarded . . . 2
Budget transfer approved . 1
Personnel:
Resignation 1
Temporary appointment extended 1
Permanent appointments . 5
Transfers 2

LICENSES, PERMITS, ETC., ISSUED.

Beverage	1	Garbage transportation permit cancelled	1
Burial permits	937	Garbage transportation permit refused	1
Denatured alcohol	78	Pedlers	93
Dump approved	1	Sausage manufacturing location transferred	1
Permit to keep goat disapproved	1	Stable permit, temporary	1
Hen licenses	52	Undertaker	1
Ice cream	67		
Manicure-massage	151		
Milk	173		
Garbage transportation permits granted	8		

MEDICAL DIVISION.

Visits:		By investigator	249
By medical inspectors	513	Cases brought to Boston for treatment	91
By veterinarian	236		

NURSING SERVICE.

Homes Visited		16,780
Child Hygiene:		
Visits to new cases	2,354	
Visits to old cases	10,769	
Total		* 13,123
Communicable Diseases:		
Visits to new cases	503	
Visits to old cases	1,401	
Total		† 1,904
Tuberculosis:		
Visits to new cases	210	
Visits to old cases	3,490	
Total		‡ 3,700
Miscellaneous Visits:		
Infant death investigations	119	
Maternal death investigations	3	
Patients accompanied to hospitals	2	
Visits to day nurseries	13	
Visits to parochial schools	42	
Other special visits	337	
Posture clinics	26	
Total		542
Total number of visits		19,269

* Includes 247 wrong addresses; 1,726 not seen; 1,973 absent visits.

† Includes 4 wrong addresses; 82 not seen; 86 absent visits; 117 ophthalmia visits.

‡ Includes 22 wrong addresses; 364 not seen; 386 absent visits.

Hours in stations by nurses	2,849 hours.
Hours in baby conferences	2,081 hours, 45 minutes.
Hours in Tuberculosis clinics	571 hours, 45 minutes.
Hours in posture clinics	40 hours.
Hours in parochial schools	59 hours, 45 minutes.
Total number of hours	* 5,602 hours, 15 minutes.

HEALTH UNITS.

Miscellaneous Unit Activities:	
Complaint of insanitary conditions	45
Number of persons given health and other information	1,118
City visitors	122
Out of city visitors	13
Dental Service:	
Number of children's teeth cleaned	282
Number of children treated	44
Prophylaxis	355
Eye Service:	
New cases	35
Number of refractions	73
Number of glasses prescribed	13
Number of examinations for diagnosis	21
Child Hygiene Division:	
Number of child health conferences	31
Total attendance at conferences	1,864
New babies at conferences	224
New preschool age children at conferences	37
Vaccinations performed	1,412
Vaccination certificates issued	806
Number of posture clinics	16
Total attendance at posture clinics	146
Toxin anti-toxin administrations	404
Tuberculosis Clinics:	
Number of clinics	41
Attendance at tuberculosis clinics	476
New cases	76
Alpine lamp treatments	104
X-ray examinations	86
Nursing Service:	
Homes visited by nurses	3,949
Total visits to babies and preschool children	2,682
Total communicable disease visits	554
Total tuberculosis visits	1,496
Infant death investigation	28
Special visits	472

* This includes child health conferences, vaccination and diphtheria immunizations at stations and tuberculosis clinics.

Boston Lying-in Hospital:	
Pre-natal Clinic:	
Number of clinics	13
Attendance	200
New cases	65
Community Health Association:	
General Division:	
Home visits by nurses	6,891
Boston Dispensary:	
Calls by district physician	92
State Department of Mental Diseases:	
Number of clinics	9
Attendance at clinics	31
Visits of workers	92
New cases	5
Infantile Clinic of Children's Hospital:	
Number of clinics	6
Attendance	40
New cases	5

REPORT OF ACTIVITIES OF MEDICAL INSPECTORS SEPTEMBER, 1927.

Toxin-antitoxin administered	391
Vaccinations given	1,727
Vaccination certificates issued	1,446
Physical examinations made	191
Visits to day nurseries	14
Visits to parochial schools	2
Conferences	14
Inspections	162
Antityphoid inoculations given	2
Special visits	3
Lamp supervisions	8
Readings	80

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

Stores inspected	3,528
Sanitary defects remedied	133
Complaints at office	32
Referred to Sanitary Division	23
Notices to abate nuisances	105
Court cases	4
Convictions	2
Fines	$20
Approved	2
Applications for pedlers' licenses approved	84
Vehicles inspected and approved	593
Laboratory Examinations:	
Bacteriological	1

CONDEMNATIONS.

Meat:	
Beef	115 pounds
Bear	15 pounds
Corned beef	25 pounds
Frankfurts	77 pounds
Ham	200 pounds
Lamb	366½ pounds
Livers	17 pounds
Livers	62 pounds
Plucks	11 pounds
Pork	14½ pounds
Poultry	287 pounds
Sausages	90 pounds
Sweetbreads	38 pounds
Tongue	1 pound
Veal	1,161½ pounds
Fish:	
Periwinkles	1 pound
Fruit:	
Apples	26 bushels
Peaches	5 crates
Vegetables:	
Mushrooms	8 pounds
Peas	52 cases
Potatoes	2,906,850 pounds
Miscellaneous:	
Candy	300 pounds
Candy	24 bars
Eggs	1,170 dozen
Eggs	269 cases
Milk chocolate	12 ounces
Molasses	28 gallons
Tonic	12 bottles

LIVE STOCK INSPECTION (Brighton Abattoir).

Cattle inspected	2,867	Parts condemned (lbs.)	13,638
Calves inspected	2,216	Animals condemned	43
Swine inspected	3,502		

DAIRY DIVISION.

Total number services	985	Total cattle inspected	5,887
Dairies inspected	548	Inspections of milk plants and licensed dealers	210
Scoring above 50 *	410	Bacteriological examinations	129
Scoring below	138	Country creamery inspections	8
With milk rooms	374	Sediment tests	78
Without milk rooms	174		
Inactive	12		

* Passable mark.

BUREAU OF MILK INSPECTION.

SAMPLES EXAMINED.

Chemical:	
Milk from wagons	241
Milk from stores	980
Milk brought by citizens	2
Vinegar	190
Ice cream	32
Salad oil	1
Miscellaneous	4
Bacteriological:	
Milk	597
Ice cream	90
Court cases	3
Fines	$30

SANITARY INSPECTION.

Original inspections	1,654	Legal notices served	145
Reinspections	5,350	Complaints investigated	669
Routine inspections made	1,053	Court cases authorized	1

BACTERIOLOGICAL LABORATORY.

Diphtheria	420
Tuberculosis	297
Typhoid	146
Gonorrhea	696
Gonorrheal ophthalmia	79
Syphilis	1,285
Other examinations*	142
Bacteriological examinations of milk	597
Bacteriological examinations of ice cream	90
Swimming pools examined	60
Water from schools	3
Extra water examined	3

MONTHLY REPORT OF VENEREAL DISEASE ACTIVITIES, SEPTEMBER, 1927.

SYPHILIS.

Under investigation September 1	25
New cases during September	10
Total	35

Disposition of Cases.

Placed under treatment	4
Unable to locate	10
False address given	4
Moved out of town	2
Under investigation	15
Total	35
New cases reported by number	47

GONORRHEA.

Under investigation September 1, 1927	31
New cases during September	41
Total	72

Disposition of Cases.

Placed under treatment	7
Unable to locate	19
False address given	8
Moved out of town	5
Under investigation	33
Total	72
New cases reported by number	189

* Malaria, 5; feces for typhoid, 27; urine for typhoid, 27; paratyphoids, 6; smears for organisms, 3; swabs for Vincent's angina, 4; urine for albumen and sugar, 43; dark field examinations, 4; stools for bacillary dysentery, 5; smears for spermatozoa, 1; genito-urinary examinations, 17.

SUMMARY.

Cases under investigation	56
New cases during	51
Total	107

DISPOSITION OF CASES.

Placed under treatment	11
Unable to locate	29
Moved out of town	12
Further treatment unnecessary	7
Under investigation	48
Total	107

COMPLAINTS.

Visits by investigator	249

DISPOSITION OF CASES.

False address	1
Under treatment	6
Unable to locate	3
Total	10

DIVISION OF TUBERCULOSIS, SEPTEMBER, 1927.

DISTRICTS.	TOTAL NUMBER OF PATIENTS AT CLINICS.			TOTAL NUMBER NEW CASES AT CLINICS.		
	Adult.	Children.	Total.	Adult.	Children.	Total.
South End	314	143	457	50	25	75
East Boston	57	102	159	9	22	31
North End	57	87	144	9	7	16
West End	60	67	127	8	12	20
South Boston	31	32	63	8	3	11
	519	431	950	84	69	153

DISTRICT.	TOTAL NUMBER.		
	Von Pirquet.	Wassermann.	Lamp Treatments.
South End	26	31	65
East Boston	17	2	18
North End	12	4	12
West End	13	2	0
South Boston	0	0	94
	68	39	99

CHILD HYGIENE DIVISION.

REPORT OF TOXIN-ANTITOXIN ADMINISTRATIONS AND VACCINATIONS AT CHILD HEALTH CONFERENCES FOR SEPTEMBER, 1927.

Station.	Toxin–Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	10	18	15	43	29
31 Lincoln street, Brighton	31	16	12	59	50
Charlestown Municipal Building	4	1	2	7	289
Codman Square Library	76	76	48	200	133
Columbia Road Municipal Building	50	38	39	127	167
1 Arcadia street, Dorchester	10	11	9	30	307
East Boston Health Unit	3	3	—	6	42
Hyde Park Municipal Building	8	5	2	15	61
Curtis Hall, Jamaica Plain	10	10	7	27	30
41 North Margin street	5	4	11	20	51
Roslindale Municipal Building	16	9	14	39	46
Beth Israel Hospital	20	20	18	58	50
Children's Hospital	5	5	3	13	1
1049 Columbus avenue	7	7	1	15	261
Vine Street Municipal Building	42	27	21	90	342
133 Dorchester street, South Boston	16	12	15	43	78
57 East Concord street	12	13	12	37	17
Shawmut Avenue Municipal Building	11	8	9	28	58
122 Tyler street	4	4	3	11	35
17 Blossom street	3	—	—	3	2
Totals	343	287	241	871	2,049

MONTHLY REPORT OF CHILD HEALTH CONFERENCES SEPTEMBER, 1927.

Station.	Number of Babies.	Number of Preschool.	Total Attendance.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	246	10	256	29	3	32	4	64
31 Lincoln street, Brighton	126	33	159	18	7	25	5	32
Charlestown Municipal Building	409	24	433	26	1	27	7	62
Codman square, Library	584	105	689	78	28	106	7	98
Columbia Road Municipal Building	582	4	586	62	2	64	7	84
1 Arcadia street, Dorchester	341	5	346	44	1	45	9	35
East Boston Health Unit	522	52	574	81	4	85	8	72
Hyde Park Municipal Building	177	14	191	20	6	26	3	64
Curtis Hall, Jamaica Plain	228	25	253	31	4	35	4	63
41 North Margin street	263	133	396	45	15	60	9	44
Roslindale Municipal Building	213	24	237	27	4	31	3	79
Beth Israel Hospital	267	79	346	24	1	25	5	69
Children's Hospital	111	11	122	16	4	20	4	31
1049 Columbus avenue	453	74	527	78	20	98	9	59
Vine Street Municipal Building	307	12	319	53	2	55	8	40
133 Dorchester street, South Boston	511	45	556	108	14	122	9	62
57 East Concord street	186	52	238	26	9	35	5	48
Shawmut Avenue Municipal Building,	131	47	178	20	12	32	4	45
122 Tyler street	118	27	145	22	—	22	4	36
17 Blossom street	420	79	499	38	1	39	8	62
Totals	6,195	855	7,050	846	138	984	122	58

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING SEPTEMBER, 1927.

Classification.	Number.	Percentage.
After death	1	3.03
Seven days or less	—	—
Eight to fourteen days, inclusive	4	12.12
Fifteen to twenty-one days, inclusive	2	6.06
Twenty-two to thirty-one days, inclusive	2	6.06
Within First Month. (Total)	9	27.27
Within second month	5	15.15
Within third month	2	6.06
Within fourth month	3	9.09
Within fifth month	3	9.09
Within sixth month	1	3.03
Within seventh month	1	3.03
Within eighth month	—	—
Within ninth month	1	3.03
Within tenth month	—	—
Within eleventh month	—	—
Within twelfth month	1	3.03
Within First Year Preceding Death. (Total)	26	78.78
Within second year	2	6.06
Within third year	2	6.06
More than three years	3	9.09
Grand totals	33	99.99

STATE CANCER HOSPITAL OPENED.

On June 21 the State Department of Health opened the Norfolk State Hospital for the diagnosis and treatment of cancer, and the name of the new hospital is the Pondville State Hospital. The equipment comprises two renovated hospital wards with a new connecting link built between. There are accommodations for eighty beds, fifty of which are for bed patients and thirty for ambulatory cases. The clinics that are now in operation in Boston, Lynn, Lowell, Newton, Springfield and Worcester will advise and educate the public to the dangers of cancer and the necessity of early diagnosis and treatment, besides acting as feeders to the new hospital. It is certain that much good will result from this progressive move in this Commonwealth, where the death rate from cancer is so high, and patients will be encouraged in the kind of treatment afforded and many returned to their homes with a message of encouragement to others similarly afflicted.

MASSACHUSETTS ASSOCIATION OF BOARDS OF HEALTH MEETING.

The regular meeting of the Massachusetts Association of Boards of Health will be held at the Hotel Bellevue, on October 28. The program arranged will be especially interesting because of the poliomyelitis situation and the committee has arranged a program which will include Dr. Milton J. Rosenau, professor of preventive medicine and hygiene at Harvard University. His paper will be "Our Poliomyelitis Problem" and will be followed by another paper on "The Epidemiology of Poliomyelitis by Dr. W. Lloyd Aycock, member of the Harvard Infantile Paralysis Commission, and director Research Laboratory, Vermont Health Department. A general discussion will be opened by George T. Lennon, agent of the Haverhill Board of Health, followed by Jacob R. Sackett, agent of the Springfield Board of Health, Dr. Thomas J. Kenney, health officer of Worcester, Clarence C. Scammon, M. D., Deputy State Health Commissioner, and others.

"What the best and wisest parent wants for his own child, that must the community want for all its children."

The baby is not a toy or a plaything but a great responsibility — its health, growth and happiness depend largely on you.

It is due to ignorance, and is a reflection upon the intelligence of any person, to become ill with typhoid fever or smallpox. Protective means have been discovered by which these diseases may be banished. It has been demonstrated that vaccination will protect you. Why not take advantage of this really free protection?

VACCINATION IS SAFE — IT IS SOUND — IT IS SURE.

RULES OF HYGIENE.

1. Ventilate every room you occupy.
2. Wear loose, porous clothing suited to season, weather, and occupation.
3. If you are an indoor worker, be sure to get recreation outdoors.
4. Sleep in fresh air always; in the open if you can.
5. Hold a handkerchief before your mouth and nose when you cough or sneeze and insist that others do so too.
6. Always wash the hands before eating.
7. Do not overeat. This applies especially to meats and eggs.
8. Eat some hard and some bulky foods; some fruits.
9. Eat slowly — chew thoroughly.
10. Drink sufficient water daily.
11. Evacuate thoroughly, regularly.
12. Stand, sit, and walk erect.
13. Do not allow poisons and infections to enter the body.
14. Keep the teeth, gums, and tongue clean.
15. Work, play, rest, and sleep in moderation.
16. Keep serene. Worry is the foe of health. Cultivate the companionship of your fellow men.
17. Avoid self drugging. Beware the plausible humbug of the patent medicine faker.
18. Have your doctor examine you carefully once a year. Also consult your dentist at regular intervals.— (U. S. P. H. S.)

VITAL STATISTICS, SEPTEMBER, 1927.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING SEPTEMBER 1927, WITH COMPARATIVE FIGURES FOR SEPTEMBER, 1926.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
All Causes:						
Total deaths	796	786	+10	12.04	11.98	+.06
Nonresidents deducted	639	622	+17	9.67	9.48	+.19
By Age:						
Under one year	128	133	—5	1.94	2.03	—.09
One year to four years, inclusive	33	35	—2	.50	.53	—.03
Sixty years and over	322	276	+46	4.89	4.21	+.66
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	46	40	+6	070	.73	—.03
Arteriosclerosis	18	25	—7	.27	.38	—.11
Heart disease	154	145	+9	2.33	2.21	+.12
Nephritis, chronic	42	49	—7	.63	.75	—.12
Infant and Maternal Mortality:						
a. Total registered live births	1,280	1,187	+93	19.37	18.10	+1.27
b. Registered stillbirths	44	40	+4	.66	.61	+.05
Stillbirths per 1,000 births and stillbirths				33.23	32.60	+.63
c. Deaths of mothers from causes incident to childbirth	9	7	+2	.14	.11	+.03
Deaths of mothers per 1,000 births and stillbirths				6.80	5.70	+1.10
Deaths of children in first year of life	128	133	—5	1.94	2.03	—.09
Deaths in first year per 1,000 live births,				100.00	112.05	—12.05
Violence:						
Accidents	39	43	—4	59	.65	—.06
Homicides	—	—	—	—	—	—
Suicides	7	12	—5	.10	.18	—.08
Miscellaneous:						
Alcoholism, acute or chronic	10	11	—1	.15	.17	—.02
Broncho-pneumonia	40	29	+11	.60	.44	+.16
Cancer	101	81	+20	1.53	1.23	+.30
Cirrhosis of the liver	3	4	—1	.04	.06	—.02
Diabetes mellitus	16	12	+4	.24	.18	+.06
Diarrheal diseases, children under two years of age	48	47	+1	.73	.72	+.01

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	135	7	+128	2.04	.11	+1.93
Deaths.	15	1	+14	.23	.015	+.215
Cerebrospinal meningitis.....Cases..	3	4	—1	.04	.06	—.02
Deaths.	2	4	—2	.03	.06	—.03
Diphtheria.....Cases..	78	45	+33	1.18	.69	+.49
Deaths	1	4	—3	.015	.06	—.045
Influenza.....Cases..	8	18	—10	.12	.27	—.15
Deaths.	2	1	+1	.03	.015	+.015
Measles.....Cases..	71	24	+47	1.07	.36	+.71
Deaths.	2	1	+1	.03	.015	+.015
Pneumonia (lobar).....Cases..	47	50	—3	.71	.76	—.05
Deaths.	13	25	—12	.20	.28	—.18
Scarlet fever.....Cases..	88	77	+11	1.33	1.17	+.16
Deaths.	1	1	+2	.04	.015	+.025
Tuberculosis (pulmonary).....Cases..	110	131	—21	1.66	2.00	—.34
Deaths.	33	46	—13	.50	.70	—.20
Tuberculosis (other forms).....Cases..	33	33	—	.50	.50	—
Deaths.	7	9	—2	.10	.14	—.04
Typhoid fever.....Cases..	31	13	+18	.47	.20	+.27
Deaths.	1	3	—1	.015	.04	—.025
Whooping cough.....Cases..	81	142	—61	1.22	2.16	—.94
Deaths.	1	4	—3	.015	.06	—.045

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1927 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

TEN RULES FOR HEALTHFUL LIVING.

Do you want to be healthy?

By following these rules most everyone can become and remain healthy:

1. Food—Milk, a quart a day for children; cereals; vegetables every day, including leafy ones such as lettuce, spinach, beet tops, to get the necessary vitamines; fruits every day; eggs; meat in moderation; sweets in moderation; 8 glasses of water a day.
2. Posture—Stand and sit straight; stand tall, keep head up, chin in, chest out, abdomen in, back straight, shoulders back; walk largely on balls of feet, with feet straight—not turned out.
3. Exercise—Enough every day to sweat freely. Walk 3 miles a day if you can't do anything better. Play in the open air.
4. Rest—When tired. Never eat a hearty meal when tired. Sleep at least 8 hours with bedroom windows open.
5. Mouth—Brush the teeth after meals and at bedtime. Keep the mouth clean. Salt and water is a good mouth wash.
6. Bowels—At least one good movement a day, preferably after breakfast. Many a headachy, ailing individual owes his trouble to constipation. Coarse cereals, vegetables, fruits like apples, prunes, etc., and plenty of water will usually ward off constipation. Don't use drugs.
7. Baths—A cold bath every day if it makes you feel good, otherwise a tepid bath; a warm cleansing bath once a week.
8. Clothing—Suitable to the season: it should not be too heavy.
9. Communicable Disease—Practise good health habits; avoid the careless spitter and sneezer, the common drinking cup or towel; eat and drink only clean foods. Keep your fingers away from your mouth.
10. Mental Hygiene—In many ways most important of all. Refuse to worry and hurry. Be calm. Control your emotions.

Be Cheerful. Be Friendly. Be Independent.

Follow Emerson's advice and work with your own hands, stand on your own feet, and think your own thoughts. Thus you will acquire poise, the truest sign of a real man or woman.

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

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VITAL STATISTICS FOR MEDICAL MEN.

(The following is the first of a series of articles and notes on vital statistics by Dr. Frederick L. Hoffman, consulting statistician, that will appear in every issue of the "Bulletin." These articles will be so written as to make them readable and attractive to medical men, public health workers, and laymen, and in such a manner that they will show their direct relation and value to the prevention of disease and prolongation of life.)

The Essential Purpose.

Vital statistics serve essentially the purpose of measuring with approximate accuracy the collective experience of large numbers of people in matters of life, death and survival. They are represented chiefly by statistics of births and deaths collected by authority, primarily for legal purposes to identify the person, but secondarily for public health and medical purposes in the furtherance of efforts to prevent disease and to prolong human life.

The Basic Data.

The basic data in vital statistics are certificates of births and deaths which have a legal status before the courts in a variety of judicial proceedings. They are usually made out by the attending physician who certifies to the occurrences of births and deaths and they therefore involve a function of the greatest possible responsi-

bility. Birth certificates are also often filled out by attending midwives or by nurses attending confinement cases. It is absolutely imperative that certificates be completely and accurately filled out since even the slightest error under given conditions may involve the most serious of consequences.

Necessity of Accuracy and Completeness.

Collectively the certificates of births and deaths resolve themselves into vital statistics compiled by local, state and federal authority. They have profound sociological and medical value as a measure of race progress and population increase. Unless accurate and complete, they may lead to far-reaching erroneous conclusions. They must be comparable from year to year with the corresponding statistics of other localities or countries to serve the largest possible public purpose.

Importance of Birth Registration.

Certificates of birth establish the identity of the person, its sex, race, age and parental origin. Certificates of birth are required for school purposes, in connection with passports, for military purposes and in many other legal procedures, such as inheritances, insurance claims, etc. Statistics of births establish the fecundity of the nation and provide an index of its social health, well-being and progress. Normally every marriage should be followed by a given number of births but marriages are often unfruitful for reasons of physiological sterility or more likely because of the growing practice of voluntary birth restriction or control.

The Normal Birth Rate.

Under modern normal conditions a birth rate should not be less than 25 per 1,000 of population. Birth rates are estimated for intercensal years upon a population calculated on the basis of the preceding growth in population during a ten or a five year period as the case may be. The birth rate of all civilized countries during the last half century has measurably declined. But in view of a declining death rate, the excess of births over deaths amounts approximately to about 10 per 1,000. That is to say the death rate is about 15 and the birth rate about 25. But these figures are modified in modern communities by improvements in mortality and by the deliberate prevention of births through birth control practices. In 1924 the birth rate of the United States birth registration area was 23 per 1,000, while that of the State of Massachusetts was 22.3. In the cities of Massachusetts the rate was 23.7, while in the rural portion of the

state, it was only 16.4. This disparity is due largely to the larger proportion of aged persons in the rural sections as the result of the migration of young persons of child-bearing age to the cities.

Specific Birth Rates.

The general birth rate is at best but a rough approximation as an index of fecundity. It fails to yield an answer to many questions of considerable sociological and medical importance. Correct fecundity rates require to be based on the number of women of child-bearing age. Unfortunately, it is often difficult to ascertain the correct population for intercensal years. To use the married population only is not sufficient, for a measurable proportion of children are born out of wedlock. The ratio of illegitimate births varies widely for the several states, being lowest in Wyoming or 0.9 per cent, and highest, on account of the negro population, in South Carolina or 8.6 per cent. For the entire birth registration area, the illegitimate birth rate in 1924 was 1.4 per cent for the white population and 12.1 per cent for the colored. The fecundity rate varies also widely for the different foreign elements. In a birth certificate the term "nationality" should never be used, but instead thereof the term "nativity," for if the foreigner is naturalized, he or she is an American and no longer an Italian, Greek, Armenian, etc., as the case may be.

Plural Births.

Plural births are of great scientific interest. In the United States birth registration area in 1924, there occurred 23,864 twin births, 226 cases of triplets and 3 cases of quadruplets. Plural births constituted 1.2 per cent of all births. The proportion of such births increases with the age of the mother, or from 0.6 per cent at ages under twenty years to 1.8 per cent at ages thirty-five to thirty-nine years.

Stillbirths.

Far too little importance is attached to the accurate and complete recording of stillbirths. It admits of no argument that much of this prenatal mortality is preventable as the result of better prenatal care. In the United States birth registration area, there were 75,817 stillbirths recorded in 1924. This is equivalent to 3.9 per cent of all live births reported. Stillbirths are not taken into account in the calculation of either birth or death rates. This is a uniform custom throughout the civilized world. The proportion of stillbirths was 8.6 per cent for mothers under fifteen years of age, declining to 3.2 per cent for the age group twenty-five to twenty-nine, and increasing to a maximum of 12.6 per cent at ages fifty to fifty-four, but in this age group the number of live births is very small indeed. There were

only 151 such births during 1924 and 19 stillbirths. Stillbirths form 4.3 per cent of all live births among mothers giving birth to their first child. The proportion declines to 3 per cent for mothers giving birth to their second child and increases to a maximum of 7.8 per cent for mothers with ten children and more. While for native born mothers, the proportion of stillbirths to live births is 3.4 per cent, it is 4.1 per cent for foreign-born mothers and 8 per cent for negro mothers.

Causes of Deaths in Stillbirths.

More information is required as regards the correct ascertainment of causes of death in stillbirths. An analysis has been made of 18,169 stillbirths by the census office for a selected area with the following results. The sex proportion was 58 per cent males and 42 per cent females. The leading cause of death was prolapse and compression of cord numbering 1,698 stillbirths, followed by placenta and membranes with 1,638, and abortions, miscarriages and premature births numbering 1,352. Difficult labor accounted for 1,600, traumatism and overwork for 661, malformations for 747, malpresentations for 991, and albuminuria and other diseases incident to pregnancy for 962. Here then is evidence of confusion as to the causes of death on the part of the child and the causes of deaths on the part of the mother. Of course, in many cases, the two would probably coincide.

It is of the utmost importance that an effort be made to ascertain the approximate period of uterogestation. In the government statistics, stillbirths begin with about the fourth month of uterine life. Out of 18,169 stillbirths, 306 were under four months; 613 four months; 1,195 five months; 1,650 six months; 2,145 seven months; 2,185 eight months; 7,180 nine months, and 345 ten months and over. In 1920 cases the period of gestation was unknown. It might have been pointed out in connection with the causes of stillbirths that the cause was not specified in 5,494 cases out of 18,169. The failure of physicians to meet the requirements of accuracy and completeness in these cases is lamentable.

Infant Mortality.

The death rate in infancy concerns children under one and is generally correlated to 1,000 births. The infant death rate has undergone profound changes for the better during the last quarter century and is now for the United States about 70 per 1,000 or 7 per cent. This still is higher than considered necessary in the light of modern knowledge of the diseases of early infancy, many of which are preventable. Thus the infant death rate of the white population is 67 per 1,000, while that of the colored population is 113. Only six years ago the white rate was 83 and the colored rate 131. There is,

therefore, gratifying progress, and further progress may be anticipated. For the City of Boston for 1924 the official infant death rate is given as 74 against 101 in 1920. The outstanding cause of death in early infancy is premature birth, accounting for 17.7 per 1,000. This is followed by diarrhea and enteritis with a rate of 9.2, and bronchitis and bronchial pneumonia with a rate of 7.8. Influenza and pneumonia give a rate of 3.9, while congenital malformations give a rate of 6.1, and congenital debility and other diseases of early infancy add a rate of 6. Thus the problem of a further reduction in early infancy concerns chiefly the gastro-intestinal diseases on the one hand and respiratory affections on the other. These are largely affected by weather conditions, suggestive of precautions well known and understood, which if followed will in many cases prevent death. Thus the mortality from diarrhea and enteritis falls chiefly upon the months of July to October, while the mortality from bronchial pneumonia, for example, falls largely upon the four months, January to April.

While the infant mortality rate is 70.8 per 1,000 for the first year of life, it is 14.8 per 1,000 for the first incompleted day of life, after which there is a rapid decline, until in the last month of the end of the year it is only 1.8, suggestive of the necessity of prenatal and antenatal care during the earliest periods of infancy. The number of deaths under one year of age in the United States in 1924 was 136,730. Of these, 28,631 were less than a day old when death occurred. During the first day of life 8,151 died, during the second day, 6,403, and during the third to sixth days, 11,905 more. Thus during the first week of life, 55,000 children died and during less than the first month of life, 74,527, out of a total of 136,730!

The question is often raised as to the comparative infant mortality of other countries, particularly Australia. The latest statistics for some countries may, therefore, be given. For the United States the present rate of infant mortality is 70.8 per 1,000 births. For the Australian Commonwealth it is 57.1. For the Canadian registration area (1923) excluding Quebec, it is 88.1; for England and Wales, 75.1; Germany (1923), 131.8; Scotland, 97.7; Italy (1923), 127.5; Japan (1922), 106.4; Netherlands (1922), 67.3 and New Zealand, 40.2. We are, therefore, as yet a long ways from the low rate prevailing in New Zealand but in part, this is the result of exceptional conditions which have no counterpart in this country.

THE CONTROL OF POLIOMYELITIS.

Our knowledge of the causal agent and manner of spread of many communicable diseases has been brought to a stage which

enables us to deal with them in a rational manner. As we have thus come to expect definite results from simple preventive measures in dealing with these diseases, there has developed a tendency to look upon an attempt to control a disease without knowing all about it, as an entirely hopeless proposition and virtually a "bluff." The fatalistic modernists in public health work who assume this attitude may be reminded that there is something more to be said on the subject.

Though groping in the dark, those responsible for the protection of the health of the public in former generations and former ages often did much in the way of disease prevention by crude and blundering methods.

Many shrewd observations regarding communicable diseases have also been made and applied to practical advantage since very ancient times. Some of the hygienic prescriptions in Leviticus cannot be improved upon today. A relation between rats and Bubonic Plague was recognized in the days of Herodotus. In India, a relative immunity in plague epidemics of members of households so long as certain household animals remained alive had likewise long been noted. Successful demonstrations that serious malarial infection might be avoided by remaining indoors after sunset gave rise to a widespread practice of shutting out the "night air" from sleeping rooms in tropical countries. Then, too, as the "gun shot" prescriptions once in vogue in the treatment of disease sometimes gave relief in obscure ailments, so crude practices for the prevention of disease were not always entirely futile.

Back in the Middle Ages, the commercial cities of the Mediterranean really did a good deal to protect themselves against the importation of the various dreaded plagues of the East. They formulated precautionary measures with a veiw to preventing the infection of ships at foreign ports of departure. The practice gave results which account for its survival today. Methods may have changed somewhat with respect both to character and scope of precautions, but a vessel arriving today at an American port from a foreign port without a consular bill of health is liable to a penalty of $5,000.

The ancient Mediterranean quarantine recognized the fact that dreaded diseases had periods of incubation during which no symptoms were discoverable. It was also observed that whatever might be the cause of an epidemic outbreak of a disease, whether in a community or on a ship, the infective agent practically lost its power to do harm after a while. They may have had better reasons than we think they had for deciding on forty days as a practical period of "quarantine" in dealing with the diseases and conditions with which they were confronted.

Fumigation, even the burning of sulphur, has been employed since very ancient times in efforts to control the spread of disease. In their expectations of what fumigation was actually accomplishing the ancients may have been unjustified. They were no further astray, however, than the modern health official who expects sulphur or formaldehyde gas to kill tubercle bacilli in the concentration in which these gases can be generated in an ordinary human dwelling. Even in the manner in which they were used, sulphur and other ancient fumigants probably had some effect upon insects, rats and other disease carrying vermin.

For many years prior to the demonstration of the mosquito transmission of yellow fever, men had given expression to their suspicions that mosquitoes were in some way accountable for the disease, but the preponderance of evidence was apparently against them.

The first recognized case of yellow fever in a yellow fever epidemic in Memphis was a woman who had not been away from the city but who had received in a letter from New Orleans a lock of hair cut from the head of a relative who had died there from the disease. Had not it been frequently observed that persons contracted yellow fever when sleeping in beds or even occupying rooms which had been used by persons who had had the disease? It was well recognized that yellow fever disappeared "when the frost came." This might be because the cold killed insects, but consider this incident. The U. S. S. "Plymouth," which had had yellow fever aboard, was put out of commission and left to freeze in Boston Harbor all winter. The next year the ship was put in commission and sent south and what was diagnosticated as yellow fever broke out again on board as soon as the ship reached the tropical waters, appearing before the ship had even touched at any other port after leaving Boston.

What better evidence than that of the character above cited could one ask for to prove that yellow fever was spread by contact with the sick and by *fomites?*

For years, our practice in dealing with vessels which were continually plying between ports in this country where the *Ædes Ægypti* was common and yellow fever infested ports of the tropics was based on the presumption of air borne or contact infection or *fomites.* With such false premises, reasonably effective preventive methods were nevertheless worked out under the stimulus of commercial necessity, for it is not to be forgotten that with rare exceptions, our quarantine practice was successful in keeping yellow fever out of this country.

We adopted the ancient idea of precautionary measures at

foreign ports of departure under consular authority. We knew well the period of incubation of yellow fever and dealt with the personnel of arriving ships accordingly. We burned sulphur extensively on ships to kill the undiscovered yellow fever germs or virus *and accidentally killed the mosquitoes.* When yellow fever did get into the country, it was through flagrant disregard of Federal quarantine regulations by some local quarantine official who admitted without proper detention some person who had left an infected port within the incubation period of the disease.

We certainly were slow in appreciating the significance of ancient observations regarding rats and the plague. At the beginning of the twentieth century, after the plague bacillus was discovered, but before the relation of the rat flea to the spread of the plague had been demonstrated, it was announced as an important discovery, sufficient to explain the mode of the transmission of any form of the plague, that experiments on animals had shown that the *bacillus pestis* was capable of penetrating the normal unbroken mucous membrane of an animal's nostrils and thus infect the animal. This discovery did not appear inconsistent with our policy of burning sulphur to disinfect lily bulbs and other articles of the cargo of ships arriving from China and as a consequence we continued unintentionally to kill rats and rat fleas.

Presumptions once held regarding the diseases above referred to may well remind us of our attitude toward poliomyelitis today. May we not therefore look to such past experience for ideas and suggestions which may be helpful to those who are constantly asking us what they shall do to avoid this paralytic scourge.

We can see that a good deal has really been done in the past in the way of the prevention of diseases, even though the procedure employed was based on erroneous assumptions. It is equally evident that more might have been accomplished if it had been recognized that these assumptions might not be entirely correct. As a concrete example, might not results have been better if some allowance had been made for the possibility that plague or malaria or yellow fever might be contracted in other ways than by inhaling something from the air?

Progress in disease prevention has always been impeded by the tenacity with which the human mind clings to the idea of air borne transmission. May not laboratory experimental evidence regarding the infectivity of nasal secretions in poliomyelitis be leading us to overemphasize the nose as a factor in the epidemic spread even of this disease?

There is, of course, such a thing as "droplet infection." That various pathogenic germs may be projected into the air is demon-

strable by holding plates of especially prepared culture media in front of the noses or mouths of persons who are sneezing or coughing. There are, however, reasons for believing that the implantation of disease germs into living beings by air transmission is not so easy as might be imagined from this spectacular culture plate demonstration.

The avoidance of the theoretical possibility of droplet infection is discouragingly difficult. If for no other reason, we should in our public instruction give people the benefit which they may be able to derive from calling their attention to the fact that in hospitals where different diseases with infective nasal or bucal secretions, such as diphtheria and scarlet fever, are treated, it has been found that the sterilization of hands and of eating and drinking utensils is certainly fully as important as the isolation of patients to prevent "cross infections."

In times of poliomyelitis epidemics, paralytic or other recognized forms of the disease undoubtedly represent exceptional manifestations of what is really a common infection. It may be assumed that at such times the infective agent of poliomyelitis is scattered about in the community by healthy persons who pick up the infective agent and pass it along to other persons some of whom develop a paralysis.

If we assume this to be so and that the infective agent comes chiefly from the nose and mouth, it necessarily follows that our family, friends and daily associates may not only be shooting the disease germs through the air into our noses, but passing them over to us with their hands or on unsterilized glasses, cups, forks, or spoons and perhaps also putting them into us, through contaminated food. In other words, this assumption means that the infective agent of poliomyelitis is spread in the community just as certain streptococci are spread which likewise find as victims a relatively few unfortunate susceptibles.

If these assumptions be correct, cleanliness with respect to hands, eating and drinking utensils and food are quite as essential as protective measures in a community where poliomyelitis is present as may be the avoidance of the proximity of possible carriers. There is another aspect of the matter, however, which encourages the hope that eventually it may be found unnecessary to take the elaborate precautionary measures against unrecognizable carriers that the above-mentioned assumptions suggest. If poliomyelitis be spread by carriers, like streptococci, it still remains to be explained why poliomyelitis epidemics abruptly cease at just the time when a lowering seasonable temperature brings about housing conditions and crowding which promote the spread of streptococci in the community.

The seasonal appearance and disappearance of poliomyelitis

epidemics has naturally aroused suspicions, as did yellow fever epidemics, that somehow some insect or insects may be factors in epidemic outbreaks of the disease, even though not essential for its transmission. Such a possibility is by no means untenable. It is even conceivable that insects may play a part indirectly in the infection of food.

On the other hand, it is to be noted that what are called epidemics of poliomyelitis may be really merely epidemics of paralytic manifestations of infection due to a physiological cause. Poliomyelitis epidemics occur in warm weather. Heat and humidity have various well-recognized effects on physiological processes. It is just beginning to be appreciated that hot weather intestinal infections are attributable in part at least to a decreased acidity and a consequently decreased antiseptic power of the gastric secretion, especially in children. It is conceivable that in some such way hot weather may produce a vulnerability to poliomyelitis infection on the part of the central nervous system.

In the practical epidemiological work that has been done, one clearly demonstrated fact stands out conspicuously. Epidemic outbreaks have been produced by infected milk. Furthermore, while nasal secretions may serve as a more convenient means of artificially infecting laboratory animals, it should not be forgotten that intestinal secretions have been found to be infective as well. We appear, therefore, to have justification for an assumption that other foodstuff beside milk may serve as a means of infection and that poliomyelitis may be spread by intestinal discharges and in any of the various ways in which typhoid fever may be spread.

In our efforts to protect people against poliomyelitis, whether by advice or otherwise, would it not be wise to lay greater emphasis on precautionary measures such as would tend to prevent the spread of a typhoid fever outbreak, in addition to measures which other assumptions might dictate? In fact, are we not justified, as an experiment at least, in applying in a community on early signs of a poliomyelitis epidemic, the same rigorous measures which we would apply to an outbreak of Asiatic Cholera?

CONDEMNATION OF POTATOES.

In the month just past the efforts of the department inspectors were directed towards stopping the flood of rotten potatoes which had been shipped to the local market for sale to the public. Due probably to the unusually wet summer, the potato crop this year suffered heavy damage from tuber rot, late and early blight and other

causes. The attention of the division was first attracted when the very early arrivals got out into the stores and complaints were received. A careful watch at the potato terminals disclosed the daily arrival of enormous quantities of this popular article of food, much of which was so far gone that even partial salvage was impossible.

The attention of the Federal authorities was called to the apparent violation of interstate regulations and every step was taken to stop these shipments at the source. Before the work here was completed, 82 carloads of potatoes, approximately 2,900,000 pounds, were seized. Under the direction of Food Inspectors they were carried to the dump and buried.

EXAMINATION OF NUTS AND POULTRY.

A feature of the work of the Food Division Inspection for the month of October was a survey, in conjunction with the Federal officials, of all nuts, including walnuts, chestnuts, filberts, castanas, and walnut meat, held in cold storage here. Upon the examination of the Federal authorities about 300 55-pound cases of Chinese walnut meat were held up by this department, for rancidity and worms.

Conferences were held by the Health Commissioner and after further examinations by State and Federal inspectors, it was determined that the condition of the nut meat as shown by the examinations did not constitute a menace to the public health, with the exception of nut meat received from China, which bore evidence of human hair and visible dirt. The walnut meat from the other countries was released for commercial use. These nuts are used in large quantities for candies, nut sundaes, and bakery products. Greater care than usual is necessary in this class of foodstuffs, because of it largely being used without any prior heating process.

Repeated visits have been made to poultry houses and the terminals for evidence of contagious diseases in poultry. Two shipments of pullets from Maine arriving in a dead or dying condition were observed. Postmortem examination was made of eight of the pullets, and a reference of a gizzard and smears from lung tissue were made to the laboratories. From these examinations, it would appear that the conditions of the pullets was caused by a form of pneumonia. Work along this line will be continued.

MEETING MASSACHUSETTS ASSOCIATION OF BOARDS OF HEALTH.

The Massachusetts Association of Boards of Health, which is the oldest organization of its kind in the country, held one of the

most interesting meetings in its history at the Hotel Bellevue, devoting the after-dinner papers to the consideration of anterior poliomyelitis (infantile paralysis) which has prevailed in epidemic form in this state for some weeks past.

There were 175 in attendance, principally health officers of more than sixty cities and towns in the Commonwealth, and their assistants. Many new applications for membership were received.

That the situation in so far as it relates to this disease is receiving the consideration of the highest officials in the Commonwealth was evidenced from the following letter from his Excellency, the Governor, which was read by the Secretary of the Association.

The program consisted of a paper "Our Poliomyelitis Program" by Dr. Milton J. Rosenau, Professor of Preventive Medicine and Hygiene at Harvard University, followed by "The Epidemiology of Poliomyelitis" by Dr. W. Lloyd Aycock, Director of the Research Laboratory of the University of Vermont. Both speakers are members of the Harvard Infantile Paralysis Commission, and Doctor Aycock has recently made epidemiological studies of the diseases in Massachusetts.

Doctor Aycock summarized the epidemiological features of poliomyelitis which his ten years of personal work in epidemics led him to emphasize. In his reference to directly contaminated raw milk as a possible cause of local outbreaks of an explosive character he summarized the conclusive character of the evidence that the local outbreak at Courtlandt, New York, often referred to, was really due to raw milk which had been infected by a milker in the acute stage of the disease.

In his talk, Professor Rosenau pointed out the analogy between the present unsatisfactory state of our knowledge of the casual factors of poliomyelitis epidemics and the false starts and erroneous deductions which have likewise characterized our progress toward a clear understanding of the methods of spread of other diseases to which we are now able to apply rational methods of control. He cautioned his hearers that experimental evidence of direct contact and epidemiological evidence of raw milk as a means of spreading poliomyelitis must not be allowed to divert attention from other possible means of spreading poliomyelitis. If contaminated milk can serve to convey the infection it would seem reasonable to assume that other foodstuff might do so as well.

Typhoid fever, for example, may be spread about in a community in many different ways.

These papers proved extremely interesting and it was evidenced by what the speakers said that progress had been made in diagnostic methods and treatment of the disease. While no definite con-

clusions have been reached as to the cause or mode of distribution of the disease, it is felt that with the extensive experiments, research and study that are being made, valuable practical information is steadily being acquired.

Dr. George T. Lennon of the Haverhill Board of Health in discussing the papers presented the epidemiology of the recent epidemic in Haverhill. Doctor Scamman described the present epidemic situation in the State from the viewpoint of the State Health Officer.

Mr. Ernest W. Ricker, representing Governor Fuller, spoke of the great interest His Excellency has in this matter, and he assured those present that the Governor was in accord with any movement to conquer this baffling epidemic disease and would lend any aid, support, and encouragement in the after-treatment of persons afflicted with this terrible malady.

[Letter From The Governor.]

The Commonwealth of Massachusetts.
Executive Department, State House,
Boston, October 26, 1927.

Mr. Stephen L. Maloney, *Secretary*, Massachusetts Association Boards of Health, Boston, Mass.

Dear Mr. Maloney,— I deeply appreciate your kind invitation to attend the luncheon of your association on October 26, where you are concentrating on the subject of infantile paralysis, and I regret that an engagement of long standing prevents my acceptance.

At this time there is no problem of disease control attracting more attention than that of infantile paralysis, and I congratulate you not only on taking it up at this time, but on having such eminent experts discuss the subject.

I note that both the speakers are members of the Harvard Infantile Paralysis Commission, which, through its intensive study of the disease, has contributed so much not only to the early recognition, and prompt treatment of the disease in the present outbreak, but also in the after care of the tragically crippled children. I understand that the type of after treatment which this commission developed under the skilful leadership of Doctor Lovett, has been used as a standard throughout the country. From research such as this commission is conducting, the ultimate conquest of the disease may come.

The close co-operation between your Associated Boards of Health the State Department of Public Health, and the Harvard Infantile Paralysis Commission is deserving of highest commendation. From

such work as this may well come effective control of this disease similar to what you are accomplishing in smallpox, typhoid fever and diphtheria.

You have my best wishes and assurance of co-operation in every way. Please consider me entirely at your command.

Very truly yours,

(Signed) ALVAN T. FULLER.

SURVEY OF THE QUALITY OF BOSTON MARKET MILK.

The following is the result of a survey made of market milk sold in Boston by dealers and chain stores during October, 1927. In Massachusetts the statute law requires a minimum of 12 per cent solids and 3.35 per cent butter fat; for bacteria it is required that it contain not more than 100,000 per cubic centimeter.

NAME OF DEALER.	SOLIDS.	FAT.	Bacteria. Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Alden Brothers	12.84	4.10	20
Allen, Fred H	12.61	3.87	20
Antetomasso, Peter	13.04	4.40	19
Barron, C. W	14.06	5.15	14
Bergmann, J. H	12.82	4.15	25
Bolio, William	11.93	3.52	23
Braniley, F. J. & P. J	12.34	3.85	20
Casey, James	12.46	3.80	10
Cashin, James	12.66	3.90	30
Cedar Hill	13.41	4.50	17
Chapin, George	12.47	3.90	22
Childs Brothers	12.99	4.22	18
Clapp, Frank L	14.10	4.85	18
Clark, Levi	12.34	3.80	20
Coleman, David	12.23	3.85	81
Converse, M. M	13.29	4.63	9
Corkery, J. J	12.43	3.77	21
Cosgrove, Martin S	12.94	4.12	16
Cummings, F. S	12.37	3.74	25
Cunningham, Paul	12.79	4.23	20
Cusick, W. H	13.06	4.13	74
Dean Louis W	13.36	4.38	19
Deerfoot Farm	12.59	3.90	10

Name of Dealer.	Solids.	Fat.	Bacteria. Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Denehy, Timothy	12.84	4.05	26
Driscoll, William B	12.64	3.83	17
Duggan Brothers	12.50	3.80	50
Edgerly, Frank S	12.90	4.10	16
Elm Spring Farm Company	12.42	3.88	28
Ferguson, M. D	13.14	4.23	18
Furbush, A. J	14.87	4.95	23
Garfield Mason	16.12	6.90	19
Garvin, C. E	14.46	4.90	19
Giroux J. E. & H. J	12.33	3.68	57
Griffin, Joseph L	12.63	3.90	16
Gushee, C. W	13.06	4.20	85
Herlihy Brothers	12.55	3.86	48
Hickey, M. J	12.60	3.95	17
Holden, John E	12.47	3.85	19
Hood, H. P. & Son	12.36	3.78	23
Hutchinson, F. T	12.43	3.65	30
Jones, William T. Company	12.60	3.85	24
Kendall, Brothers	12.48	3.83	24
Kingston, Samuel	12.46	3.85	14
Knapp, George J	12.58	3.82	30
Lang Brothers	12.12	3.80	80
Larson, Charles	12.51	3.88	24
Le Baron, F. N	15.16	5.85	38
Lincoln Farms	12.05	3.58	8
Lyndonville Creamery	12.77	4.05	23
Manning, Peter	12.54	3.75	25
McAdams, J. F	12.85	4.05	15
McKernan, James	12.57	3.95	40
Millwood Farms	12.42	3.78	25
Munchback, George	12.72	4.03	34
Newton & Pope	12.79	4.10	17
Noble, William F., & Co	12.66	4.00	20
Robinson, A. J	12.70	4.00	28
Schuster, Adam	12.84	3.98	29
Seven Oaks	12.37	3.83	8
Shick, Jacob	12.49	3.80	35
Somerset Farms	13.18	4.53	14
Sterling Farms Milk	12.52	3.88	21

Name of Dealer.	Solids.	Fat.	Bacteria. Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Stone, H. L.	12.69	3.98	10
Stuart, W. E.	12.60	3.95	16
Swett, Warren	12.62	3.92	195
Turner Center System	12.39	3.78	26
United Farmers Co-operative Creamery Company	12.92	4.08	16
Vartanian, S.	12.46	3.88	35
Vartanian, K.	12.72	4.10	42
Walker-Gordon	12.72	4.25	10
Weiler, E., & Sons*	12.38	3.75	35
Werner Company	12.23	3.73	14
Westwood Farms	12.25	3.75	23
White Brothers	12.69	3.85	20
Whiting Milk Company	12.46	3.81	20
Whittemore, W. D.	12.83	4.13	18
Wiswall, George A.	12.64	4.00	28
Woodland, Charles L.	12.49	3.90	31

* Through clerical error the September, 1927, survey gave for E. Weiler & Sons, total solids, per cent, 11.67 and fat, per cent, 3.52. The correct amount of total solids present is 12.16 per cent, and fat 3.69 per cent.

CHAIN STORE MILK.

Name of Dealer.	Supplied By.	Solids.	Fat.	Bacteria. Thousands In One Cubic Centimeter.
		Per Cent.	Per Cent.	
The Great Atlantic & Pacific Tea Company.	Hood & Sons Company	12.36	3.83	53
The Cloverdale Company	Turner Centre System, Inc.,	12.33	3.73	72
John T. Connor Company	Bellows Falls Co-operative Creamery Company.	12.86	4.15	21
Economy Grocery Stores	Whiting Milk Companies	12.25	3.68	22
The Ginter Company	United Farmers	13.20	4.30	22
Morgan Brothers Company	Morgan Brothers	12.79	4.15	25
O'Keefe's, Inc	Bellows Falls Co-operative Creamery Company.	12.85	4.12	20
Winer, M.	Hyman Winer	12.94	4.07	129

SUMMARY OF THE WORK, OCTOBER, 1927.

BUREAU OF ADMINISTRATION.

Prosecutions ordered	8	Leave of absence	1
Legal notices	180	Retirement	1
Contracts awarded	2	Permanent appointments	4
Personnel:		Temporary appointment	1
Resignations	3		

LICENSES, PERMITS, ETC., ISSUED.

Beverage	1	Manicure-massage	83
Burial permits	1,005	Milk	173
Denatured alcohol	50	Grease	1
Dump approved	1	Milk pasteurization	25
Garbage	2	Pedlers	38
Ice cream	11	Undertakers	4
Hen licenses	26		

MEDICAL DIVISION.

Visits:		Cases brought to Boston for treatment	94
By medical inspectors	697	Deaths investigated	4
By veterinarian	129		
By investigator	282		

NURSING SERVICE.

Homes Visited		17,393
Child Hygiene:		
Visits to new cases	1,469	
Visits to old cases	11,410	
Total		* 12,879
Communicable Diseases:		
Visits to new cases	819	
Visits to old cases	2,179	
Total		† 2,998
Tuberculosis:		
Visits to new cases	187	
Visits to old cases	4,269	
Total		‡ 4,456
Miscellaneous Visits:		
Infant death investigations		109
Maternal death investigations		6
Patients accompanied to hospitals		4
Visits to day nurseries		15
Visits to parochial schools		75
Other special visits		323
Posture clinics		22
Total number of all visits		20,887
Hours in stations by nurses		3,042
Hours in baby conferences		2,085
Hours in tuberculosis clinics		716½
Hours in posture clinics		36
Hours in parochial schools		119
Total number hours		§ 5,998½

* Includes 166 wrong addresses; 1,698 not seen; 1,864 absent visits.

† Includes 21 wrong addresses; 114 not seen; 135 absent visits; 186 ophthalmia.

‡ Includes 38 wrong addresses; 570 not seen; 608 absent visits.

§ This includes child health conferences, vaccination and diphtheria immunizations at stations and tuberculosis clinics.

MISCELLANEOUS UNIT ACTIVITIES:

Complaints of insanitary conditions	31
Number of persons given health and other information	1,092
City visitors	52
Out of city visitors	21

DENTAL SERVICE:

Number of children examined	1,862
Nol prophylactic administrations	3,300
Number of cleanings	207

NOSE AND THROAT CLINIC:

Number of clinics	0
Number of examinations	0
Number of operations advised	0

EYE SERVICE:

Number of refractions	126
Number examined for diagnosis	0
Number of new cases	57
Number of glasses prescribed	0

CHILD HYGIENE DIVISION:

Number of child health conferences	36
Attendance at conferences	1,706
New babies at conferences	254
New preschool age children at conferences	36
Number of Toxin-antitoxin administrations	263
Number of vaccinations performed	218
Number of vaccination certificates issued	417
Number of examinations for camps and day nurseries	175
Number of posture clinics	23
Total attendance at posture clinics	253

TUBERCULOSIS DIVISION:

Number of clinics	45
Total attendance at tuberculosis clinics	550
New cases	89
Number of X-rays	44

NURSING SERVICE:

Homes visited by nurses	4,422
Total visits to babies and pre-school age children	2,708
Total communicable disease visits	1,048
Total tuberculosis visits	1,133
Infant death investigation visits	38
Special visits	10
Maternal death investigations	5

BOSTON DISPENSARY:

Calls by district physician	127

Boston Lying-in Hospital:

Number of pre-natal clinics	13
Total attendance at clinics	205
New cases	58

Community Health Association:

Home visits by nurses in district	7,681

Infantile Clinic of Children's Hospital:

Number of clinics	7
Total attendance	78
New cases	11

State Department of Mental Diseases:

Number of habit-forming clinics	9
Total attendance	36
New cases	4
Home visits	74

REPORT OF ACTIVITIES OF MEDICAL INSPECTORS OCTOBER, 1927.

Inspections	434
Physical examinations	701
Toxin-antitoxin administrations	819
Vaccinations	220
Vaccination certificates issued	310
Antityphoid innoculations	1
Day nursery visits	10
Parochial school visits	47
Conferences	5
Special	2
Lamp treatments	69
Readings	120
Culture taken	1

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

Stores inspected	5,015
Sanitary defects remedied	244
Complaints at office	59
Referred to Sanitary Division	28
Milk applicants	46
Notices to abate nuisances	156
Court cases	1
Discharges	1
Applications for pedlers' licenses approved	40
Vehicles inspected and approved	628
Laboratory Examinations:	
Bacteriological	16
Chemical	4

CONDEMNATIONS.

Meat:		Meat:	
Bacon	7 pounds	Tongue	1 pound
Beef	2,577 pounds	Veal	293½ pounds
Chicken	22½ pounds		
Frankfurts	123 pounds	Fruit:	
Ham	66 pounds	Figs	487 pounds
Lamb	38 pounds	Peaches	50 pounds
Livers	8 pounds	Potatoes	10 pounds
Pigeons	24 pounds	Chestnuts	9,580 pounds
Plucks	13 pounds	Chestnuts	1 bushel
Pork	25 pounds	Currants	13 pounds
Poultry	215 pounds	Raisins	82 pounds
Squabs	8 pounds	Walnut meat	55 pounds
Sweetbreads	31 pounds	Walnuts	1,065 pounds
Smoke shoulders	9 pounds	Miscellaneous	1,500 pounds

LIVE STOCK INSPECTION (Brighton Abattoir).

Cattle inspected	3,930	Parts condemned (lbs.)	22,189
Calves inspected	2,665	Animals condemned	66
Swine inspected	3,938		

DAIRY DIVISION.

Total inspection	771	Inactive	11
Dairies inspected	523	Total cattle inspected	7,056
Scoring above 50 *	320	Inspections of milk plants and licensed dealers	209
Scoring below	203	Country creamery inspections	15
With milk rooms	358	Sediment tests	10
Without milk rooms	165		

* Passable mark.

BUREAU OF MILK INSPECTION.

SAMPLES EXAMINED.

CHEMICAL:	
Milk from wagons	192
Milk from stores	964
Milk brought by citizens	2
Vinegar	138
Tonics	2
Chicken	1
Flour	1
Cigarette	1
Miscellaneous	6
BACTERIOLOGICAL:	
Milk	530
Ice cream	67
Court cases	9
Fines	$100

SANITARY INSPECTION.

Original inspections	2,771	Complaints investigated	714
Routine inspections	2,010	Court cases authorized	7
Reinspections	7,478	Fines	$105
Legal notices served	216		

BACTERIOLOGICAL LABORATORY.

Diphtheria	615
Tuberculosis	322
Typhoid	75
Gonorrhea	741
Gonorrheal ophthalmia	63
Syphilis	1,150
Other examinations *	257
Bacteriological examinations of milk	530
Bacteriological examinations of ice cream	67
Swimming pools examined	60
Water from schools	12

MONTHLY REPORT OF VENEREAL DISEASE ACTIVITIES, OCTOBER, 1927.

SYPHILIS.

Current cases under investigation October 1, 1927	15
New cases reported during October	12
Total	27

Disposition of Cases.

Placed under treatment	5
Unable to locate	9
False address given	3
Under investigation October 31, 1927	10
Total	27
New cases reported by number	67

GONORRHEA.

Current cases under investigation October 1, 1927	33
New cases reported during October	61
Total	94

Disposition of Cases.

Placed under treatment	21
Unable to locate	18
False address given	7
Moved out of town	4
Under investigation	44
Total	94
New cases reported by number	201

* Malaria, 7; urine for sugar and albumen, 72; genito-urinary tuberculosis, 19; smear for organisms, 1; chicken liver for organisms, 5; dark field examinations, 5; walnut meats for B. coli, 9 samples; smears for Vincent's angina, 9; smear for meningitis, 1; water for B. coli, 5; blood culture for organisms, 1; smear for diphtheria, 2; biscuits for organisms and moulds, 1; feces for B. typhosus, 79; urine for B. typhosus, 33; smear for virulence, 1; shellfish for B. coli, 7.

SUMMARY.

Current cases under investigation October 1, 1927	48
New case reported during month of October	73
Total	121

Disposition of Cases.

Placed under treatment	26
Unable to locate	27
False address given	10
Moved out of town	4
Under investigation October 31, 1927	54
Total	121
Visits by investigator	282

VENEREAL COMPLAINTS AND SOURCES OF INFECTION.

Placed under treatment	2
Unable to locate	4
Total	6

LEAD POISONING IN EARLY CHILDHOOD.

For this year there has been reported to this department on death certificates four deaths of children from lead poisoning, all such causes of death having been certified by the medical examiner. These deaths were due to a childhood habit of sucking paint from cribs with the consequent ingestion of lead and subsequent lead poisoning and death. It would thus be well for mothers and others entrusted with the care of children in cribs to watch for this common habit in early child life and to take steps to correct it wherever it is found.

A clean cloth or other clean material attached to the side of the crib or other part which a child with this habit is likely to reach with its mouth is a good preventive of this paint-sucking habit. The cloth or other material should be attached in such a temporary manner that it will readily admit of being easily changed so that it may at all times be kept clean.

Here is one cause of death in early childhood that can positively be prevented if we watch the habits of the child with its crib, high chair, or other painted article which comes within its reach.

DIVISION OF TUBERCULOSIS, OCTOBER, 1927.

Districts.	Total Number Cases at Clinics.			Total Number New Cases.		
	Adult.	Children.	Total.	Adult.	Children.	Total.
South End	274	179	453	44	31	75
East Boston	52	175	227	13	18	31
North End	60	79	139	7	4	11
West End	52	38	90	6	5	11
South Boston	67	45	112	13	24	37
Hyde Park	20	26	46	6	7	13
Codman square	39	11	50	6	—	6
Charlestown	10	6	16	3	1	4
Old Town Hall	15	3	18	5	—	5
Totals	589	562	1,151	103	90	193

Districts.	Von Pirquet.	Wassermann.	Lamp.	X-Ray. (Recommended.)
South End	23	33	79	83
East Boston	8	2	36	22
North End	4	2	29	23
West End	5	3	2	4
South Boston	15	7	2	26
Hyde Park	—	5	—	—
Codman square	—	3	—	—
Charlestown	—	—	—	—
Old Town Hall	2	4	—	5
Totals	57	59	148	163

CHILD HYGIENE DIVISION.

REPORT OF TOXIN-ANTITOXIN ADMINISTRATIONS AND VACCINATIONS AT CHILD HEALTH CONFERENCES FOR OCTOBER, 1927.

Station.	Toxin–Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	3	5	1	9	8
31 Lincoln street, Brighton	4	5	10	19	8
Charlestown Municipal Building	1	2	2	5	43
Codman Square Library	36	27	34	97	48
Columbia Road Municipal Building	17	15	13	45	48
1 Arcadia street, Dorchester	2	5	6	13	19
East Boston Health Unit	—	—	—	—	3
Hyde Park Municipal Building	6	11	11	28	30
Curtis Hall, Jamaica Plain	3	4	—	7	7
41 North Margin street	6	4	1	11	1
Roslindale Municipal Building	6	10	8	24	14
Beth Israel Hospital	23	15	5	43	17
Children's Hospital	—	—	1	1	1
1049 Columbus avenue	13	15	5	33	60
Vine Street Municipal Building	6	5	14	25	80
133 Dorchester street, South Boston	4	—	2	6	13
57 East Concord street	1	—	—	1	15
Shawmut Avenue Municipal Building	1	5	2	8	8
122 Tyler street	1	3	—	4	8
17 Blossom street	—	—	—	—	—
Totals	133	131	115	379	431

MONTHLY REPORT OF CHILD HEALTH CONFERENCES OCTOBER, 1927.

Station.	Number of Babies.	Number of Preschool.	Total Attendance.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	188	14	202	27	11	38	3	67
31 Lincoln street, Brighton	82	22	104	10	2	12	4	26
Charlestown Municipal Building	253	21	274	19	2	21	7	39
Codman square, Library	380	91	471	61	17	78	7	67
Columbia Road Municipal Building	498	5	503	43	2	45	7	72
1 Arcadia street, Dorchester	293	10	303	35	1	36	8	38
East Boston Health Unit	425	29	454	83	7	90	8	57
Hyde Park Municipal Building	190	20	210	19	1	20	4	43
Curtis Hall, Jamaica Plain	179	27	206	25	9	34	3	69
41 North Margin street	185	52	237	22	5	27	8	30
Roslindale Municipal Building	249	40	289	26	4	30	4	72
Beth Israel Hospital	199	53	252	28	2	30	4	63
Children's Hospital	92	9	101	10	3	13	4	25
1049 Columbus avenue	347	35	382	58	4	62	8	48
Vine Street Municipal Building	309	10	319	35	7	42	8	40
133 Dorchester street, South Boston	459	33	492	77	14	91	8	62
57 East Concord street	174	24	198	17	6	23	4	49
Shawmut Avenue Municipal Building,	119	28	147	22	4	26	3	49
122 Tyler street	120	8	128	20	—	20	4	32
17 Blossom street	351	70	421	24	5	29	8	53
Totals	5,092	601	5,693	661	106	767	114	50+

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING OCTOBER, 1927.

Classification.	Number.	Percentage.
After death	5	10.00
Seven days or less	3	6.00
Eight to fourteen days, inclusive	3	6.00
Fifteen to twenty-one days, inclusive	1	2.00
Twenty-two to thirty-one days, inclusive	—	—
Within First Month. (Total)	12	24.00
Within second month	4	8.00
Within third month	5	10.00
Within fourth month	3	6.00
Within fifth month	3	6.00
Within sixth month	1	2.00
Within seventh month	2	4.00
Within eighth month	1	2.00
Within ninth month	1	2.00
Within tenth month	5	10.00
Within eleventh month	1	2.00
Within twelfth month	1	2.00
Within First Year Preceding Death. (Total)	39	78.00
Within second year	2	4.00
Within third year	1	2.00
More than three years	8	16.00
Grand totals	50	100.00

It is due to ignorance, and is a reflection upon the intelligence of any person, to become ill with typhoid fever or smallpox. Protective means have been discovered by which these diseases may be banished. It has been demonstrated that vaccination will protect you. Why not take advantage of this really free protection?

VACCINATION IS SAFE — IT IS SOUND — IT IS SURE.

RULES OF HYGIENE.

1. Ventilate every room you occupy.
2. Wear loose, porous clothing suited to season, weather, and occupation.
3. If you are an indoor worker, be sure to get recreation outdoors.
4. Sleep in fresh air always; in the open if you can.
5. Hold a handkerchief before your mouth and nose when you cough or sneeze and insist that others do so too.
6. Always wash the hands before eating.
7. Do not overeat. This applies especially to meats and eggs.
8. Eat some hard and some bulky foods; some fruits.
9. Eat slowly — chew thoroughly.
10. Drink sufficient water daily.
11. Evacuate thoroughly, regularly.
12. Stand, sit, and walk erect.
13. Do not allow poisons and infections to enter the body.
14. Keep the teeth, gums, and tongue clean.
15. Work, play, rest, and sleep in moderation.
16. Keep serene. Worry is the foe of health. Cultivate the companionship of your fellow men.
17. Avoid self drugging. Beware the plausible humbug of the patent medicine faker.
18. Have your doctor examine you carefully once a year. Also consult your dentist at regular intervals.— (U. S. P. H. S.)

VITAL STATISTICS, OCTOBER, 1927.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING OCTOBER 1927, WITH COMPARATIVE FIGURES FOR OCTOBER, 1926.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
All Causes:						
Total deaths	871	902	—31	13.18	13.75	—.57
Nonresidents deducted	703	742	—39	10.64	11.31	—.67
By Age:						
Under one year	126	160	—34	1.91	2.44	—.53
One year to four years, inclusive	39	23	+16	.59	.35	+.24
Sixty years and over	352	326	+26	5.33	4.97	+.36
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	59	58	+1	.89	.88	+.01
Arteriosclerosis	14	24	—10	.21	.36	—.15
Heart disease	147	156	—9	2.22	2.38	—.16
Nephritis, chronic	47	62	—15	.71	.94	—.23
Infant and Maternal Mortality:						
a. Total registered live births	1,396	1,252	+144	21.12	19.09	+2.03
b. Registered stillbirths	27	42	+15	.41	.64	—.23
Stillbirths per 1,000 births and stillbirths	.....	.....	.....	18.97	32.46	—13.49
c. Deaths of mothers from causes incident to childbirth	13	13	—	.20	.19	+.01
Deaths of mothers per 1,000 births and stillbirths	.....	.....	.....	9.13	10.05	—.92
Deaths of children in first year of life	126	160	—34	1.91	2.44	—.53
Deaths in first year per 1,000 live births	.....	.....	.....	90.26	127.79	—37.53
Violence:						
Accidents	52	60	—8	.79	.91	—.12
Homicides	3	5	—2	.04	.08	—.04
Suicides	14	10	+4	.21	.15	+.06
Miscellaneous:						
Alcoholism, acute or chronic	5	11	—6	.07	.17	—.10
Broncho-pneumonia	35	46	—11	.53	.70	—.17
Cancer	110	105	+5	1.66	1.60	+.06
Cirrhosis of the liver	3	8	—5	.04	.12	—.08
Diabetes mellitus	12	15	—3	.18	.23	—.05
Diarrheal diseases, children under two years of age	35	41	—6	.53	.62	—.09

	CASES AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
Communicable Diseases:						
Anterior poliomyelitis.....Cases..	124	4	+120	1.88	.06	+1.82
Deaths.	17	1	+16	.26	.015	+.245
Cerebrospinal meningitis.....Cases..	1	1	—	.015	.015	—
Deaths.	1	1	—	.015	.015	—
Diphtheria.....Cases..	78	63	+15	1.18	.96	+.22
Deaths	6	—	+6	.09	—	+.09
Influenza.....Cases..	13	13	—	.20	.19	+.01
Deaths.	2	2	—	.03	.03	—
Measles.....Cases..	259	28	+231	3.92	.43	+3.49
Deaths.	2	1	+1	.03	.015	+.015
Pneumonia (lobar).....Cases..	76	53	+23	1.15	.81	+.34
Deaths.	27	19	+8	.41	.29	+.12
Scarlet fever.....Cases..	158	178	—20	2.39	2.71	—.32
Deaths.	2	1	+1	.03	.015	+.015
Tuberculosis (pulmonary).....Cases..	108	133	—25	1.63	2.03	—.40
Deaths.	50	47	+3	.76	.72	+.04
Tuberculosis (other forms).....Cases..	23	28	—5	.35	.43	—.08
Deaths.	8	11	—3	.12	.17	—.05
Typhoid fever.....Cases..	13	27	—14	.20	.41	—.21
Deaths.	3	5	—2	.04	.08	—.04
Whooping cough.....Cases..	103	77	+26	1.56	1.17	+.39
Deaths.	3	3	—	.04	.04	—

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1927 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

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MONTHLY BULLETIN

HEALTH DEPARTMENT

CITY OF BOSTON

FRANCIS X. MAHONEY, M. D., *Health Commissioner.*

Communications relating to this publication should be addressed to the EDITOR MONTHLY BULLETIN, HEALTH DEPARTMENT, BOSTON.

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SOME PRACTICAL DIETARY CONSIDERATIONS.

As we have added little by little to our still very imperfect knowledge of metabolism and nutrition, it has frequently become necessary to abandon or revise former hypotheses and to make radical changes in our teachings regarding dietary needs.

As we have thus grown in wisdom, we have seen that human beings are not always wrong in their intuitive selection of articles which enter into their habitual diet. The appetite of people or of animals may not assure a judicious selection from an abundant variety of foodstuffs, but probably human beings as well as animals do tend to avoid what is harmful and to turn to that which is needed for the maintenance of proper nutrition when economic conditions or environment really permit of a free choice.

Back of a perverted appetite some abnormal bodily condition is often discoverable. Where such results of a defective habitual diet as beri-beri, pellagra, scurvy or dental caries are conspicuous, there will be found also living conditions which tend to prevent salutary dietary habits.

It is thus that nature checks the tendency of life to outrun the means of sustaining it. Civilized people, crowded in unsatisfactory economic conditions, may degenerate and disappear because

of unsuitable food while a primitive people, confronted with a harder struggle for existence, may find physical vigor in a comparatively few articles of food which have been instinctively selected to meet their biological needs.

As it is dangerous to give a horse free access to oats, so may a man kill himself by the overeating of some articles of food. On the other hand, there is a natural tendency for man to develop an aversion to any foodstuff before it becomes dangerously prominent in his diet. A monotonous, even though potentially nutritious ration, has often been responsible for mutinous outbreaks among normal, vigorous men.

Deductions from "scientific" nutritional experiments on certain individuals under laboratory conditions are not to be relied upon implicitly. In spite of the progress which has been made in our knowledge of nutrition there is still much in man's relation to his food which is mysterious. A satisfactory diet for a group of people is largely a matter of experiment with the people themselves. It will be found to vary with the kind of people to be fed, the character of their customary food, and the actual conditions under which they are living. The latest dietetic theories often work badly when practically applied.

Not long ago we were taught that proper nutrition was a matter of chemistry and calories. Then came the discovery of what are popularly called "vitamins," but which McCollum refers to as "unidentified food elements." In the last thirty years text-books on the physiology of digestion have been rewritten several times and we are still far from being able to formulate satisfactory exposition of even the chemical aspect of the subject.

We have come to realize some of the possibilities of so-called dietary deficiencies, but the problems which this subject practically presents contain some very elusive factors. For some reason inexplicable in the light of our present knowledge, we may see people who are apparently thriving in spite of their diet. A dietary deficiency may not produce the same results in the laboratory guinea pig as in the laboratory rat.

The discovery of the effect of light in preventing the development of rickets and of the results of the radiation of food have served further to complicate the problem of metabolic needs. We have learned now to prevent pellagra by diet, but a feeling that something further regarding pellagra still remains to be learned is expressed by a state health officer who remarked, "you can't make me believe that the dietary habits of the people in this state have so changed recently as to account for a drop in deaths from pellagra in this state from 1,500 to 500 in a single year."

By selection of their food, we have learned to stimulate the growth of animals which it is customary to market by weight at early maturity. Cows' milk, designed to meet the biological needs of young animals which may attain a weight of 600 pounds in two years, is advantageously employed to fatten hogs and chickens. A healthy child may be expected similarly to respond to the growth stimulating effect of a diet in which cows' milk plays a prominent part, even though a child differs so markedly from a calf in digestive apparatus, stomach capacity and developmental period. But how far is it safe to go in thus stimulating early growth? Size and the period of development vary as regular normal attributes of different animals, of different human races, of different human species and even as human family traits. Periods of unusual rapidity of growth appear to be characterized by increased susceptibility to active infective processes.

A marked deviation in size, whether below or above the average of a being's immediate progenitors and not to be accounted for by the inheritance of normal traits, is abnormal and likely to be accompanied by some structural weakness. The amateur gardener soon learns not to buy the big, thick-stemmed tomato plants whose growth has been stimulated with nitrate of soda.

The assimilation of food is a complex process in which are involved the mysterious phenomena of life itself. Some of the factors which may promote or derange this process we have come to recognize from observing the results of their influence. We know that emotions may exert a profound influence on bodily nutrition. We have learned that the sudden adoption of an unaccustomed diet is attended with considerable risk.

The consequences would be distressing and probably disastrous if an American city-bred professional man should suddenly adopt the diet on which the Mexican peon apparently thrives and certainly develops extraordinary muscular strength. During the Civil War a high mortality among Federal prisoners in the South was indirectly attributable to a ration which they and the Confederate soldiers shared alike. It was made up of corn in a form and amount to which the Northerners were unaccustomed. The satisfactory adjustment of our Italian immigrants to a new dietary régime has been and still is a practical health problem of vital importance to them and their children.

The discovery of a common cause of beri-beri in a diet consisting chiefly of highly milled rice has been followed by the advocacy of the use of the whole of other cereal grains for food purposes. An attempt of one European government to use whole wheat for its army during the World War had to be abandoned because of the

intestinal irritation thereby produced. Partially milled wheat had to be substituted in the bread ration. Perhaps in the army of some other European country, such a modification of whole wheat might have been unnecessary. Attempts in this country during the war to substitute other cereal or cereal mixtures for wheat flour in the dietary of inmates of large institutions likewise frequently gave rise to digestive disturbances which necessitated further changes with respect to the amount or physical character of the substitutes for the fine wheat flour to which the inmates were accustomed. Oatmeal, commonly recommended as a food for children, is frequently responsible for digestive trouble if long continued. In the writer's experience, oatmeal has proved an unsatisfactory addition to the diet of adult Italians, though means were found to oblige them to eat it. So, too, the objection of Scotchmen to corn (maize) meal is not to be ascribed entirely to prejudice. Those who may feel inclined to discard oatmeal as a cereal may, however, be reminded that in American-bred groups during the war oatmeal seemed to be less productive of trouble than some other wheat substitutes, at least in the form in which they were used.

Harmful mechanical irritation may also result from the chemical product of an unfortunate combination of foods. Cows' milk may again be used to furnish an example. Cows' milk, being biologically designed to meet the requirements of a growing calf, contains lime salts far in excess of the needs of a human being when taken by the latter in sufficient quantities to be of appreciable food value in other respects. Even assuming the various conditions essential to lime metabolism are present and are functioning so as to enable the growing child to take up and "fix" lime to the maximum capacity, the child must nevertheless find a way of getting rid of a great deal of surplus lime. A diabolical inspiration has put spinach into the diet of a milk-fed child. Spinach may be full of vitimins and may contain iron in an assimiable form, but it also contains oxalic acid. As a result, the child is obliged to excrete lime as insoluable, hard, sharp crystals of oxalate of lime. This may tend to prevent constipation but it also tends to throw these irritating crystals into the kidneys and bladder where they have dangerous possibilities which ought to be more generally appreciated.

The symptoms of vascular irritation, as indicated by increased blood pressure, which may result from a habit of taking an unnecessary amount of salt with food, will serve as another example of the harmful possibilities of a theoretically desirable chemical.

Food may give rise to symptoms of irritation from still another cause. Among the practical considerations which the theoretically adequate, well-balanced diet does not take into account is a possible

sensitivity on the part of an individual to certain food proteins, a condition which virtually serves to convert a usually desirable food into a poison as far as this individual is concerned. Such food idiosyncrasies are comparatively common.*

When infrequent articles of food are involved, the adult usually discovers that they do not agree with him, and avoids them, but the responsibility of wheat bread for a chronic asthma or of potatoes for a persistent colitis is likely to long pass unrecognized. Although less common in children than in adults food sensitivity is more serious in the former. The child is not expected to know what is good for him and consequently the child that happens to be sensitized to a protein of oatmeal or eggs or cows' milk, virtually has its doom sealed. Those who feel called upon to inculcate proper dietary habits in children may be reminded that a young child usually shows a cutaneous reaction to the protein of articles of food to which it customarily exhibits a dislike.

Consistency and physical character as well as calories and chemical complexity affect the practical value of a food. One may swallow whole large chunks of tough steak with impunity and experience internal discomfort from a soft unmasticated banana. The benefit to be derived from a food may depend on the way it is cooked or the combinations in which it is served. Cooking may be bad either because of the physical or of the chemical results thereby produced. Failure for any reason to assimilate a food means not merely loss of its theoretical nutritive value, but perhaps the formation of physical or chemical products which may do positive permanent harm.

The cause of ulcer and of cancer of the digestive tract is unknown. It has been discovered, however, that by diet alone it is possible to produce in the stomach wall of an animal a cell proliferation indistinguishable from that precedent to the formation of either ulcer or cancer and by a change of diet cause it to disappear.

Early in life, the alimentary canal of man or of animals becomes the site of parasitic growths. They frequently include parasitic worms. In whatever other ways these worms may disturb metabolism and nutrition, it is to be remembered that such worms, including the common round worm, as well as the hookworm, secrete a specific toxin which directly poisons the host.

Bacterial parasites also find their way into the alimentary canal. A large part of infant mortality is immediately related to bacterial invasion of the digestive tract. Untimely adult deaths from premature degenerative changes have also been ascribed to the character of the intestinal flora.

* The subject of food sensitivity was considered in the "Bulletin" for April, 1927.

An impetus was given to the study of this subject by Metchnikoff who suggested that the exceptionally vigorous old age of a certain Balkan people whom he had studied was due to the special breed of bacteria contained in a soured milk which they used as a beverage. Metchnikoff ascribed the wonderful effects of this beverage to the so-called bacillus Bulgarus, but it has since appeared that the bacillus acidopholus should probably be credited with qualities attributed by Metchnikoff to the bacillus Bulgarus.

More recent investigations have disclosed an indirect beneficent action of a soured milk as well as of certain other foods in determining the character of bacterial flora in the digestive tract, quite apart from the possible ability of the bacillus acidopholus or the bacillus Bulgarius to supplant noxious bacterial growths. Our present knowledge of this aspect of the subject is summarized in a very concise and interesting article by Dr. Lloyd Arnold,* in the "Journal of the American Public Health Association" for September, 1927.

It would appear that the acidity of the gastric juice normally determines the character of the bacteria in the alimentary canal. Given the proper degree of acidity the gastric secretion not only destroys pathogenic bacteria which may be introduced into the stomach, but by its acid combinations in the partly digested food leaving the stomach, prevents the common bacterial denizens of the lower intestine from extending their growth to the upper third of the intestinal canal where they produce harmful effects.

The acidity of the gastric secretion and consequently its germicidal power may be diminished by hot weather, especially in children in whom the heat-adjusting mechanism as yet works poorly. It may be diminished by the ingestion of alkalis or of certain foods, referred to by the experimenters as "alkaline buffered foods." Of these, cows' milk furnishes an example in contrast to human milk, a fact which is recognized in the devices of present day pediatricians for modifying the alkaline influence of cows' milk in the child's stomach.

The acidity of the gastric secretion and its germicidal power may be fortified by what the experimenters refer to as "acid buffered foods." Various beverages, including acid or fermented vegetable or animal products likewise tend to increase or at least conserve the protective acidity of the gastric secretion.

It is harmful to take into the body an unnecessary amount of salt and the tendency to do so is to be ascribed to a perverted appetite, yet man's craving for sodium chloride arises from a physiological

* Influence of food upon the bacterial flora of the small intestine. Read before the Food and Drug Section of the American Public Health Association at the fifty-fifth annual meeting at Buffalo, N. Y., October 11, 1926.

need. There can be little doubt that the widespread use of sour fermented animal milks and juices of fruits by man all over the world from prehistoric times, indicates an instinctive recognition of the value of the "acid buffered foods" in the maintenance of health. For what other reason does a man call for a pickle with his oyster stew? Present knowledge would make it probable that Paul gave sounder advice when he wrote Timothy to use a *little* wine for his stomach's sake than if he had prescribed bicarbonate of soda.

It is to be kept in mind, however, that like other dietary experiments those summarized by Doctor Arnold merely throw more light on one particular feature of nutrition.

The addition of acids to diet can be easily overdone. It does not require an excessive amount of lemonade to interfere with digestion.

While not so common as popularly supposed there are abnormal conditions characterized by the presence of acid products in the bodily tissues. It does not necessarily follow, however, that such conditions are produced by an excessive intake of acid. The taking of certain acids even tend to promote the formation of alkaline chemical compounds in the blood. Moreover, as there is an abnormal condition which may be appropriately referred to as acidosis, so the term *alkalosis* may serve to describe another undesirable condition.

Both acids and alkalis have a well-known action in the stomach entirely beyond the scope of the experiments referred to by Doctor Arnold. When the gastric secretion continually encounters alkaline foods or beverages tending to neutralize its acidity, the effect is to stimulate the secretory glands to produce a secretion of higher acidity. It is thus that there may be produced in the stomach a condition of hyperacidity which gives rise to troublesome symptoms by reason of the irritating effect of the secretion on the stomach itself. Bicarbonate of soda or other alkalis have a legitimate emergency use in neutralizing the acidity of the stomach contents and thus serving to bring about the relaxation of a muscular spasm and the emptying of the stomach when the spasm has been caused by an irritating acidity of the stomach contents, whatever the reason therefor, but the tendency of an alkali to increase the acidity of the gastric secretion is one reason why the habitual use of bicarbonate of soda aggravates conditions which it is often taken to alleviate.

As the stomach thus reacts to overcome a chemical obstacle to digestion so through all the assimilative processes nature struggles to meet the difficulties presented by an unsuitable diet. The struggle may be hopeless and death soon follow. It may result in

the gradual production of a pathological condition whose cause is not recognized; or dietary handicaps may apparently be overcome without detriment to health.

It is thus that a person comes to represent a more or less successful adaptation of the human body to the kind of food which it has been accustomed to get. Success in utilizing one kind of food may be accompanied by lessened adaptibility for another, though potentially more nutritious. This is one of the reasons why dietetic theories may give unexpected results when practically applied.

MASSACHUSETTS ASSOCIATION OF BOARDS OF HEALTH.

The annual meeting and luncheon of the Massachusetts Association of Boards of Health will be held at the Hotel Bellevue, Beacon street, Boston, Mass., Thursday, January 26, at 12.30 p. m. Luncheon will be provided for $1.50 per person.

Program.

The responsibility for the care and treatment of tuberculosis by the Commonwealth and by the town, city and county, with the attendant difficulties of settlement, subsidy and responsibility, is a subject of much concern to those entrusted with this work, besides being confusing as to charges and cost.

Papers.

"Present Resources for Handling Tuberculosis in Massachusetts," by Dr. George H. Bigelow, Commissioner of Public Health of Massachusetts.

"Local Care and Responsibility of Tuberculosis," by Dr. George T. O'Donnell, Director, Division of Tuberculosis, Boston Health Department.

"Settlement Laws and their Application to Tuberculosis," by William H. Hardy, formerly Secretary Department of Public Welfare, City of Boston.

Try to attend and bring a friend.

For reservations write Postoffice Box 5271, Boston, or phone Hubbard 5100, line 150.

STEPHEN L. MALONEY,
Secretary.

CONDEMNATION OF FOODSTUFFS.

There was much unfit food condemned during the Thanksgiving season, and such food included 6,500 pounds of turkeys that were seized and destroyed. This condition is attributed to the fact of an early date (Thanksgiving), a warm and rainy season, and shipment of birds before the animals' heat had left their bodies. Other large condemnation at this time were 72,100 pounds of mouldy grapes, and about 30,000 pounds of wormy and decomposed raisins.

VITAL STATISTICS FOR MEDICAL MEN.

(The following notes are a continuation of the series by Dr. Frederick L. Hoffman, consulting statistician, that began in the last issue of the "Bulletin." As explained at that time, these notes will be so written as to make them readable and attractive to medical men, public health workers and laymen, and in such a manner that they will show their direct relation and value to the prevention of disease and prolongation of life.)

The Death Certificate.

The death certificate is possibly the most important official document with which medical men come in frequent contact. Upon the accuracy and completeness of the death certificate depend a large variety of important legal and other considerations, while the mere fact of death itself is of the utmost concern to the state. The filling out of the death certificate, therefore, imposes upon the attending physician primary legal obligations which cannot be shifted however burdensome at times this duty may be. Neglect to file a death certificate or to file one incorrectly or incompletely filled out will lead to serious consequences, for it is a statutory requirement which must be complied with. Far too many medical men take their duty in this respect indifferently, with sometimes lamentable results to those concerned.

But the death certificate also serves most important medical and social purposes. Death certificates collectively represent the most essential branch of vital statistics which underlie all modern health-promoting activities. The science of preventive medicine is chiefly based on vital statistics while likewise such statistics are essential for public health purposes in connection with the control of infectious and contagious diseases. A standard death certificate which is in universal use throughout this country and Canada contains on the back extracts from the laws of the Commonwealth of Massachusetts which cannot be too thoroughly understood or too vigorously complied with. But there is much that is not a matter of statutory duty but nevertheless called for on the part of the attending physician. This applies particularly to the cause of death and the contributory cause or causes which should be given in full detail, including the approximate known duration of the disease or diseases as the case may be.

Section 16 of the death certificate requires information as to the time of death which is often omitted. This information is essential for both legal and medical purposes.

Section 17 requires information concerning where the disease was contracted if not at the place at which death occurred. In view of the large number of out-of-town patients who are treated for various diseases in city hospitals or otherwise, it is imperative that this requirement should not be overlooked or superficially dealt with.

Of equal importance is accuracy regarding the question "Did an operation precede death?" if so, for what, together with the date of operation. Much medical research at the present time is in a backward condition because of the incompleteness of many death certificates upon this important point.

If there was an autopsy the information should be given. Physicians should encourage the obtaining of the consent for autopsies which require to be made much more frequently than is at present the case. The ascertainment of the correct cause of death by means of an autopsy is of the first importance for medical and sometimes for legal purposes.

Under No. 2 information is required as regards the length of residence where death occurred. Here again the increasing extent to which out-of-town patients utilize city facilities for treatment makes information upon this point of great importance.

Under No. 7 information is required as regards the occupation of the deceased. Here again many physicians are negligent in not giving correct information in detail. What is wanted is information as to the specific occupation followed at time of death. The general information on this matter is often grossly misleading or otherwise valueless. The development of industrial hygiene within recent years has made accurate information on occupations and their relation to disease of the first importance.

The Registration Area.

The term "Registration Area" is frequently misunderstood. It has reference to the area of the United States for which certificates of death are returned in a given proportion satisfactory to the Census Office. That office has its Division of Vital Statistics in charge of Dr. William H. Davis, formerly the registrar of the Boston Board of Health. It has gradually increased commencing in 1880 with a proportion of only 17 per cent of the total American population, which by 1910 had reached 58.3 per cent and by 1924, 88.5 per cent. Strenuous efforts are now being made to complete the registration area by 1930 through the efforts of a special committee financed by several industrial life insurance companies. The regis-

tration area consists of registration states and registration cities. For the former the returns are acceptable to the Census Office for the entire state population, while for the latter they represent states unacceptable but containing cities, the local returns of which are complete. Hence the Census Office uses two terms in general usage, registration area and registration states. For the latter the analysis is more complete and given in more detail, particularly by ages and sex. The term "Registration Area" applies also to births but in a different proportion. A birth registration was first established in 1915 when it represented 31.1 per cent of the total American population. This by 1924 had been increased to 76.2 per cent. Thus, both as regards birth and death, we are closely approaching towards the ideal condition when returns for the entire Continental United States will be available. The noncontiguous areas and our foreign possessions are not included in the registration area. But separate returns as regard deaths are published for the territory of Hawaii and it is to be hoped that in course of time Alaska, Panama and all our other foreign possessions will be included.

Classification of Causes of Death.

While this function is generally performed by authority, all physicians should be thoroughly familiar with the official manual of "Causes of Death and Their Classification" as issued by the United States Census Office. The Office issues for gratuitous distribution a Pocket Manual which should be in the possession of every physician. The methods of classification in vogue are now in universal application throughout practically the whole civilized world. There should be no misunderstanding as to the fact that the international list of causes of death is quite a different matter from a medical nomenclature based upon other considerations. The list in general use gives 205 designated causes or groups of causes which facilitate local, national and international comparison. It is amplified by a manual of "Joint Causes of Death" of which the second edition was issued by the Census Office in 1925. This emphasizes particularly the urgency of stating precisely primary and secondary or contributory causes or conditions as the case may be. Of great value in this connection also is "A Standard Nomenclature of Diseases and Pathological Conditions, Injuries and Poisonings," issued by the Census Office in 1920. These three sources are sufficient for all practical purposes and will aid materially those who wish to assist medical research in improving vital statistics towards a higher degree of intrinsic trustworthiness.

(*To be continued.*)

SURVEY OF THE QUALITY OF BOSTON MARKET MILK.

The following is the result of a survey made of market milk sold in Boston by dealers and chain stores during November, 1927. In Massachusetts the statute law requires a minimum of 12 per cent solids and 3.35 per cent butter fat; for bacteria it is required that it contain not more than 100,000 per cubic centimeter.

Name of Dealer.	Solids.	Fat.	Bacteria Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Alden Brothers	12.85	4.15	29
Allen, Fred H.	12.56	3.80	22
Antetomasso, Peter	13.07	4.25	18
Barron, C. W.	14.10	5.15	10
Bergmann, J. H.	12.65	4.00	332
Bolio, William	12.58	3.79	23
Brandley, F. J. & P. J.	12.73	3.95	37
Casey, James	12.58	3.85	16
Cashin, James	12.62	3.93	22
Cedar Hill	13.41	4.45	22
Chapin, George	12.56	3.98	26
Childs Brothers	12.66	4.00	18
Clapp, Frank L.	13.23	4.00	60
Clark, Levi	12.32	3.75	20
Coleman, David	12.23	3.82	21
Converse, M. M.	13.19	4.23	10
Corkery, J. J.	12.86	3.85	36
Cosgrove, Martin S.	13.30	4.75	100
Cummings, F. S.	12.31	3.76	18
Cunningham, Paul	12.82	4.00	11
Cusick, W. H.	12.99	4.03	22
Dean, Louis W.	12.49	3.85	28
Deerfoot Farm	12.76	4.04	20
Denehy, Timothy	12.95	4.62	400
Driscoll, William B.	12.63	3.80	20
Edgerly, Frank S.	12.64	3.65	12
Elm Spring Farm Company	12.35	3.74	20
Ferguson, M. D.	12.92	3.93	19
Furbush, A. J.	14.62	5.00	32
Garfield, Mason	14.33	5.10	26
Garvin, C. E.	15.38	6.08	19
Giroux, J. E. & H. J.	12.55	3.78	38
Griffin, Joseph L.	13.11	4.30	17

Name of Dealer.	Solids.	Fat.	Bacteria, Thousands in One Cubic Centimeter.
	Per Cent.	Per Cent.	
Gushee, C. W.	13.10	4.25	14
Herlihy Brothers	12.50	3.80	77
Hickey, M. J.	12.51	3.95	13
Holden, John E.	12.45	3.88	14
Hood, H. P., & Sons	12.45	3.83	20
Hutchinson, F. T.	12.22	3.70	30
Jones, William T., Company	12.79	4.07	21
Kendall Brothers	12.61	3.88	17
Kingston, Samuel	12.36	3.50	14
Knapp, George J.	12.46	3.83	18
Lang Brothers	12.55	3.88	20
Larson, Charles	12.50	3.75	14
LeBaron, F. N.	15.35	6.35	34
Lincoln Farms	12.13	3.93	18
Lyndonville Creamery	12.80	3.90	16
Manning, Peter	12.60	3.93	20
McAdams, J. F.	12.68	4.12	21
McKernan, James	13.64	4.55	10
Millwood Farm	12.42	3.77	19
Munchback, George	12.60	4.05	30
Newton & Pope	12.88	4.25	24
Noble, William F., & Co	12.84	4.09	19
Reddin, F. W.	12.45	3.98	22
Robinson, A. J.	12.48	3.80	30
Schuster, Adam	13.12	3.90	26
Seven Oaks	12.66	3.82	26
Shick, Jacob	12.58	3.80	17
Somerset Farms	13.33	4.32	16
Sterling Farms Milk	12.75	3.88	16
Stone, H. L.	12.74	4.05	18
Stuart, W. E.	13.06	4.45	14
Swett, Warren	12.94	4.23	12
Turner Center System	12.45	3.72	18
United Farmers Co-operative Creamery Company	12.64	4.08	17
Vartanian, S.	12.48	3.70	40
Vartanian, K.	12.68	4.05	18
Walker-Gordon	12.79	4.10	9
Weiller, E., & Son	12.65	3.90	293
Westwood Farms	12.43	3.73	16

Name of Dealer.	Solids.	Fat.	Bacteria Thousands in One Cubic. Centimeter.
	Per Cent.	Per Cent.	
White Brothers	12.28	3.80	20
Whiting Milk Company	12.45	3.83	20
Whittemore, W. D.	12.68	4.05	24
Wiswall, George A.	12.26	3.70	80
Woodland, Charles L.	12.90	4.38	46

CHAIN STORE MILK.

Name of Dealer.	Supplied By.	Solids.	Fat.	Bacteria. Thousands in One Cubic Centimeter.
		Per Cent.	Per Cent.	
The Great Atlantic & Pacific Tea Company.	Hood & Sons	12.47	3.79	17
M. Brown & Son	Whiting Company	12.12	3.67	12
Cloverdale Company	Turner Centre System	12.40	3.75	19
First National Stores	Bellows Falls Co-operative Creamery Company.	13.05	4.19	17
Economy Grocery Stores	Whiting Company	12.34	3.77	19
Morgan Brothers Company	Morgan Brothers	13.05	4.40	25
M. Winer	Hyman Winer	12.77	3.87	39

SUMMARY OF THE WORK, NOVEMBER, 1927.

BUREAU OF ADMINISTRATION.

Legal notices	147	Personnel:	
Prosecutions ordered	2	Retirement	1
Lying-in Hospital approved	3	Leave of absence granted	1
Bid accepted	3	Leave of absence terminated,	2
Miscellaneous hearings	2	Appointments, temporary	3
Forcible removal	1	Appointment, permanent	1
Budget transfer	1	Temporary appointment extended	1
Proposals asked	3	Removal from office	1

LICENSES, PERMITS, ETC., ISSUED.

Beverage	1	Hen licenses	51
Burial permits	1,071	Manicure-massage	137
Denatured alcohol	74	Milk	170
Dumps approved	2	Offensive trades	2
Dump disapproved	1	Pedlers	36
Grease	2	Sausage manufacturing	1
Ice cream	4	Undertakers	3

MEDICAL DIVISION.

Visits:		Cases brought to Boston for treatment	97
By medical inspectors	932	Deaths investigated	11
By veterinarian	187		
By investigator	284		

NURSING SERVICE.

Homes Visited		20,366
Child Hygiene:		
Visits to new cases	1,670	
Visits to old cases	12,977	
Total		* 14,647
Communicable Diseases:		
Visits to new cases	1,298	
Visits to old cases	3,267	
Total		† 4,565
Tuberculosis:		
Visits to new cases	208	
Visits to old cases	4,637	
Total		‡ 4,845
Miscellaneous Visits:		
Infant death investigations	77	
Maternal death investigations	4	
Visits to day nurseries	22	
Visits to parochial schools	65	
Other special visits	178	
Posture clinics	27	
Total		368
Total number of visits		24,425
Hours in stations by nurses		3,374
Hours in baby conferences		2,217
Hours in tuberculosis clinics		856
Hours in posture clinics		82
Hours in parochial schools		78
Total number of hours		§ 6,608

* Includes 152 wrong addresses; 1,871 not seen; 2,023 absent visits.

† Includes 26 wrong addresses; 132 not seen; 158 absent visits; 255 ophthalmia visits.

‡ Includes 46 wrong addresses; 578 not seen; 624 absent visits; includes 2,286 positive cases; 1,365 contact cases, and 570 suspect cases.

§ This includes child health conferences, vaccination and diphtheria immunizations at stations and tuberculosis clinics.

HEALTH UNITS.

Miscellaneous Unit Activities:	
Complaint of insanitary conditions	19
Number of persons given health and other information	970
City visitors	47
Out of city visitors	25
Dental Service:	
Number of children's teeth cleaned	252
Number of children treated	2,485
Prophylaxis	4,846
Eye Service:	
New cases	36
Number of refractions	106
Number of glasses prescribed	46
Number of examinations for diagnosis	18
Child Hygiene Division:	
Number of child health conferences	30
Total attendance at conferences	1,591
New babies at conferences	140
New preschool age children at conferences	42
Vaccinations performed	110
Vaccination certificates issued	180
Number of posture clinics	24
Total attendance at posture clinics	422
Toxin-antitoxin administrations	163
Tuberculosis Clinics:	
Number of clinics	48
Attendance at tuberculosis clinics	568
New cases	69
Alpine lamp treatments	222
X-ray examinations	100
Nursing Service:	
Homes visited by nurses	5,795
Total visits to babies and preschool children	3,553
Total communicable disease visits	1,440
Total tuberculosis visits	1,946
Infant death investigation	22
Special visits	1
Boston Lying-in Hospital:	
Pre-natal Clinic:	
Number of clinics	12
Attendance	192
New cases	66
Community Health Association:	
General Division:	
Home visits by nurses	8,124
Boston Dispensary:	
Calls by district physician	174

State Department of Mental Diseases:

Number of clinics	8
Attendance at clinics	31
Visits of workers	138
New cases	6

Infantile Clinic of Children's Hospital:

Number of clinics	6
Attendance	68
New cases	4

FOOD INSPECTION DIVISION.

MARKET, STORE AND RESTAURANT SERVICE.

Stores inspected	4,324
Sanitary defects remedied	153
Complaints at office	39
Referred to Sanitary Division	8
Milk applicants	42
Notices to abate nuisances	84
Court cases	1
Convictions	1
Fines	$150
Applications for pedlers' licenses approved	43
Vehicles inspected and approved	614
Laboratory Examinations:	
Bacteriological	6
Chemical	4

CONDEMNATIONS.

Bacon	10 pounds	Smoked shoulder	60 pounds
Bear	50 pounds	Sweetbreads	15
Beef	281 pounds	Tongues	4
Chicken	158 pounds	Sausages	5 pounds
Coons	26 pounds	Poultry	351 pounds
Deer	265 pounds	Turkeys	6,501½ pounds
Duck	275½ pounds	Veal	33 pounds
Frankfurts	65 pounds	Halibut	28½ pounds
Fowl	58 pounds	Lettuce	25 crates
Lamb	324 pounds	Pepper	135 baskets
Lamb tongues	60 pounds	Grapes	72,100 pounds
Livers	8	Oranges	6 dozen
Mutton	303 pounds	Flour	50 pounds
Plucks	7	Chocolates	1,300 pounds
Pork	232 pounds		

LIVE STOCK INSPECTION (Brighton Abattoir).

Cattle inspected	4,653	Parts condemned (lbs.)	19,542
Calves inspected	3,269	Animals condemned	57
Swine inspected	4,020		

DAIRY DIVISION.

Total number of services	987	Total cattle inspected	6,135
Dairies inspected	511	Inspections of milk plants and licensed dealers	275
Scoring above 50 *	415	Bacteriological examinations	20
Scoring below	96	Country creamery inspections	16
With milk rooms	390	Sediment tests	143
Without milk rooms	121		
Inactive	20		

BUREAU OF MILK INSPECTION.

SAMPLES EXAMINED.

CHEMICAL:	
Milk from wagons	266
Milk from stores	840
Milk brought by citizens	5
Vinegar	36
Bottles	50
Ice cream	10
Caps	132
Water	1
Sausage	2
Salt	1
Miscellaneous	2
BACTERIOLOGICAL:	
Milk	564
Ice cream	106
Court cases	4
Fines	$80

SANITARY INSPECTION.

Original inspections	2,324	Legal notices served	137
Nuisances abated	1,534	Complaints investigated	512
Reinspections	5,883	Court cases authorized	2

BACTERIOLOGICAL LABORATORY.

Diphtheria	1,038
Tuberculosis	489
Typhoid	58
Gonorrhea	717
Gonorrheal ophthalmia	50
Syphilis	1,471
Other examinations †	192
Bacteriological examinations of milk	564
Bacteriological examinations of ice cream	101
Milk bottles examined	50
Caps for bottles examined	132
Swimming pools examined	75
Water from schools examined	15

* Passable mark.

† Malaria, 1; urine for sugar and albumen, 111; genito-urinary tuberculosis, 6; rabies, 2; water for B. Coli, 2; dark field examinations, 6; smears for Vincent's angina, 9; roast beef for animal experimentation, 1; urine for organisms, 3; smoked shoulder for animal experimentation, 1; condensed milk for animal experimentation, 1; urine for B. typhosus, 20; fæces for B. typhosus, 29.

MONTHLY REPORT OF VENEREAL DISEASE ACTIVITIES, NOVEMBER, 1927.

SYPHILIS.

Current cases under investigation, November 1, 1927	10
New cases during November	16
Total	26

Disposition of Cases.

Placed under treatment	5
Unable to locate	3
Under investigation, December 1, 1927	18
Total	26
New cases reported by number	67

GONORRHEA.

Current cases under investigation, November 1, 1927	44
New cases during November	34
Total	78

Disposition of Cases.

Placed under treatment	18
Unable to locate	15
False address given	5
Under investigation, December 1, 1927	40
Total	78
New cases reported by number	200

SUMMARY.

Current cases under investigation, November 1, 1927	54
New cases during November	50
Total	104

Disposition of Cases.

Placed under treatment	23
Unable to locate	18
False address given	5
Under investigation December 1, 1927	58
Total	104
Visits by investigator	284

VENEREAL COMPLAINTS AND SOURCES OF INFECTION.

Under treatment	3
Unable to locate	2
Total	5

Districts.	Number of Clinic Sessions.	Total Number Cases at Clinics.			Total Number New Cases at Clinics.		
		Adult.	Children.	Total.	Adult.	Children.	Total.
South End	16	193	127	320	28	18	46
East Boston	14	70	189	259	13	27	40
North End	12	52	91	143	11	10	21
West End	12	66	25	91	5	1	6
South Boston	9	62	43	105	9	2	11
Hyde Park	8	38	50	88	11	9	20
Brighton	8	13	4	17	2	3	5
Codman square	8	49	28	77	11	10	21
Charlestown	8	36	22	58	6	2	8
Totals	1,158	579	579	1,158	96	82	178

Districts.	Von Pirquet.	Wassermann.	Lamp.	X-Ray. (Recommended.)
South End	25	10	78	178
East Boston	21	6	85	51
North End	10	—	39	8
West End	1	2	1	19
South Boston	10	7	36	34
Hyde Park	6	2	—	—
Brighton	2	1	—	1
Codman square	10	2	—	—
Charlestown	3	—	—	—
Totals	88	30	239	291

CHILD HYGIENE DIVISION.

REPORT OF ACTIVITIES OF MEDICAL INSPECTORS NOVEMBER, 1927.

Inspections	913
Physical examinations	211
Toxin-antitoxin administrations	802
Vaccinations	110
Vaccination certificates issued	228
Day nursery visits	29
Parochial school visits	17
Special visits	1
Schick readings	48
Schicks	10

CHILD HYGIENE DIVISION.

REPORT OF TOXIN-ANTITOXIN ADMINISTRATIONS AND VACCINATIONS AT CHILD HEALTH CONFERENCES FOR NOVEMBER, 1927.

Station.	Toxin–Antitoxin.				Number of Vaccinations.
	First.	Second.	Third.	Total.	
Old Town Hall, Brighton	4	2	3	9	4
31 Lincoln street, Brighton	—	1	2	3	1
Charlestown Municipal Building	3	3	1	7	8
Codman Square Library	27	33	31	91	14
Columbia Road Municipal Building	9	9	11	29	19
1 Arcadia street, Dorchester	7	7	1	15	7
East Boston Health Unit	—	—	—	—	1
Hyde Park Municipal Building	—	—	—	—	11
Curtis Hall, Jamaica Plain	7	1	4	12	3
41 North Margin street	11	8	14	33	—
Roslindale Municipal Building	1	4	7	12	6
Beth Israel Hospital	17	16	25	58	3
Children's Hospital	—	—	—	—	3
1049 Columbus avenue	3	5	14	22	41
Vine Street Municipal Building	4	5	7	16	31
133 Dorchester street, South Boston	1	7	3	11	7
57 East Concord street	—	—	1	1	7
Shawmut Avenue Municipal Building	8	6	5	19	4
122 Tyler street	2	1	5	8	6
17 Blossom street	—	—	—	—	—
Totals	104	108	134	346	176

MONTHLY REPORT OF CHILD HEALTH CONFERENCES OCTOBER, 1927.

Station.	Number of Babies.	Number of Preschool.	Total Attendance.	Number of New Babies.	Number of New Preschool.	Total New Cases.	Number of Conferences.	Average Attendance.
Old Town Hall, Brighton	307	10	317	46	4	50	5	63
31 Lincoln street, Brighton	65	14	79	7	2	9	3	26
Charlestown Municipal Building	274	12	296	41	1	42	9	32
Codman square, Library	515	94	609	59	14	73	9	68
Columbia Road Municipal Building	609	8	617	45	4	49	9	69
1 Arcadia street, Dorchester	371	19	390	46	3	49	8	49
East Boston Health Unit	389	38	427	36	4	40	7	61
Hyde Park Municipal Building	163	12	175	22	—	22	4	44
Curtis Hall, Jamaica Plain	283	21	304	33	4	37	5	61
41 North Margin street	207	80	287	30	10	40	8	36
Roslindale Municipal Building	254	33	287	24	1	25	4	72
Beth Israel Hospital	157	46	203	17	—	17	3	68
Children's Hospital	134	14	148	19	2	21	5	30
1029 Columbus avenue	346	43	389	51	3	54	8	49
Vine Street Municipal Building	251	17	268	32	7	39	7	38
140 Dorchester street, South Boston	450	26	476	51	13	64	8	60
57 East Concord street	118	17	135	13	—	13	3	45
Shawmut Avenue Municipal Building,	167	50	217	17	11	28	5	43
122 Tyler street	132	28	160	18	1	19	5	32
17 Blossom street	322	53	375	27	—	27	7	54
Totals	5,514	635	6,149	634	84	718	122	50

DIVISION OF TUBERCULOSIS, NOVEMBER, 1927.

In the month of November, there were ninety five clinic sessions held in the nine dispensaries.

Distribution of Clinics was as follows:

At the South End Health Unit	16
At the North End Health Unit	12
At the West End Health Unit	12
At the South Boston Health Unit	9
At the Hyde Park Health Unit	8
At the Brighton Health Unit	8
At the Codman Square Health Unit	8
At the Charlestown Health Unit	8
At the East Boston Health Unit	14
Total number of cases	1,158

TIME ELAPSING BETWEEN DATE OF REPORTING CASES OF PULMONARY TUBERCULOSIS AND DATE OF DEATH, DURING NOVEMBER, 1927.

Classification.	Number.	Percentage.
After death	5	11.91
Seven days or less	5	11.91
Eight to fourteen days, inclusive	6	14.29
Fifteen to twenty-one days, inclusive	4	9.52
Twenty-two to thirty-one days, inclusive	1	2.38
Within First Month. (Total)	21	50.01
Within second month	4	9.52
Within third month	2	4.76
Within fourth month	1	2.38
Within fifth month	2	4.76
Within sixth month	—	—
Within seventh month	—	—
Within eighth month	3	7.14
Within ninth month	1	2.38
Within tenth month	—	—
Within eleventh month	2	4.76
Within twelfth month	—	—
Within First Year Preceding Death. (Total)	36	85.71
Within second year	2	4.76
Within third year	2	4.76
More than three years	2	4.76
Grand totals	42	99.99

VITAL STATISTICS, NOVEMBER, 1927.

BIRTHS, REPORTABLE ILLNESS, AND DEATHS IN BOSTON DURING NOVEMBER, 1927, WITH COMPARATIVE FIGURES FOR NOVEMBER, 1926.

	BIRTHS AND DEATHS.					
	Actual Number.			Rate per 1,000 Population, Except Where Otherwise Specified.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
All Causes:						
Total deaths	868	926	—58	13.13	14.12	—.99
Nonresidents deducted	699	755	—56	10.58	11.51	—.93
By Age:						
Under one year	94	120	—26	1.42	1.83	—.41
One year to four years, inclusive	42	39	+3	.63	.59	+.04
Sixty years and over	349	366	—17	5.28	5.58	—.30
By Special Causes:						
Degenerative Diseases, So Called:						
Apoplexy	47	60	—13	.71	.91	—.20
Arteriosclerosis	27	21	+6	.41	.32	+.09
Heart disease	169	178	—9	2.56	2.71	—.15
Nephritis, chronic	61	42	+19	.92	.64	+.28
Infant and Maternal Mortality:						
a. Total registered live births	1,239	1,152	+87	18.75	17.56	+1.19
b. Registered stillbirths	36	27	+9	.54	.41	+.13
Stillbirths per 1,000 births and stillbirths	—	—	—	28.23	22.90	+5.33
c. Deaths of mothers from causes incident to childbirth	10 —	10	—	.15	.15	—
Deaths of mothers per 1,000 births and stillbirths				7.84	8.48	—.64
Deaths of children in first year of life	94	120	—26	1.42	1.83	—.41
Deaths in first year per 1,000 live births,				75.87	104.17	—28.30
Violence:						
Accidents	50	55	—5	.76	1.41	—.65
Homicides	4	2	+2	.06	.03	+.03
Suicides	8	9	—1	.12	.14	—.02
Miscellaneous:						
Alcoholism, acute or chronic	13	10	+3	.20	.15	+.05
Broncho-pneumonia	49	43	+6	.74	.65	+.09
Cancer	93	114	—21	1.41	1.74	—.33
Cirrhosis of the liver	4	8	—4	.06	.12	—.06
Diabetes mellitus	14	14	—	.21	.21	—
Diarrheal diseases, children under two years of age	17	15	+2	.26	.23	+.03

	CASES AND DEATHS.					
	ACTUAL NUMBER.			RATE PER 1,000 POPULATION, EXCEPT WHERE OTHERWISE SPECIFIED.		
	1927.	1926.	Increase or Decrease.	1927.	1926.	Increase or Decrease.
COMMUNICABLE DISEASES:						
Anterior poliomyelitis.....Cases..	50	4	+46	.76	.06	+.70
Deaths.	8	1	+7	.12	.015	+.105
Cerebrospinal meningitis.....Cases..	4	2	+2	.06	.03	+.03
Deaths.	3	2	+1	.04	.03	+.01
Diphtheria.....Cases..	96	127	—31	1.45	1.94	—.49
Deaths.	2	6	—4	.03	.09	—.06
Influenza.....Cases..	18	11	+7	.27	.17	+.10
Deaths.	4	3	+1	.06	.04	+.02
Measles.....Cases..	568	26	+542	8.59	.40	+8.19
Deaths.	4	2	+2	.06	.03	+.03
Pneumonia (lobar).....Cases..	109	98	+11	1.65	1.49	+.16
Deaths.	35	42	—7	.53	.64	—.11
Scarlet fever.....Cases..	228	291	—63	3.45	4.44	—.99
Deaths.	2	1	+1	.03	.015	+.015
Tuberculosis (pulmonary).....Cases..	123	136	—13	1.86	2.07	—.21
Deaths.	42	52	—10	.63	.79	—.16
Tuberculosis (other forms).....Cases..	24	23	+1	.36	.35	+.01
Deaths.	6	9	—3	.09	.14	—.05
Typhoid fever.....Cases..	13	11	+2	.20	.17	+.03
Deaths.	—	1	—1	—	.015	—.015
Whooping cough.....Cases..	136	91	+45	2.06	1.39	+.67
Deaths.	2	1	+1	.03	.015	+.015

The foregoing tables include all deaths known to have occurred in Boston. No deductions have been made for nonresidents, except in the one line where the deaths of residents are specifically stated as such. The word "nonresident" here means a person whose usual place of abode is elsewhere than in Boston.

All deaths of infants have been included as deaths and not as stillbirths, if so reported by the attending physician, the rule being to report as a death every case in which the infant died after having manifested any sign of life whatsoever after birth.

Death rates of mothers from causes incident to pregnancy and childbirth, and stillbirth rates, are computed on the basis of the recorded number of births and stillbirths taken together, per 1,000. Death rates of children under one year old are computed on the basis of the number of recorded live births, per 1,000.

For the purpose of computations set forth above, the estimated population for July 1, 1927 (mid-year), based upon the federal census of 1920, has been used.

DO NOT DESTROY.

When you have no further use for this Circular give it to someone else.

AUG 1 1928